



Desert

MARCH, 1952 35 Cents

Pageant of Desert History...

AT CALEXICO and Mexicali on the California border the townspeople of the two communities, one on the American and the other on the Mexican side of the fence, are making plans for the presentation March 21 and 22 of the 13th annual showing of the International Desert Cavalcade, a historical pageant which each year has brought increasing numbers of visitors to the outdoor stadium in Calexico.

On two successive evenings spectators will witness, in a rugged natural setting, the pageant of history as it was enacted from Captain Juan Bautista de Anza's first expedition across the Colorado desert until the ultimate conquest of the unharnessed Colorado River in 1907.

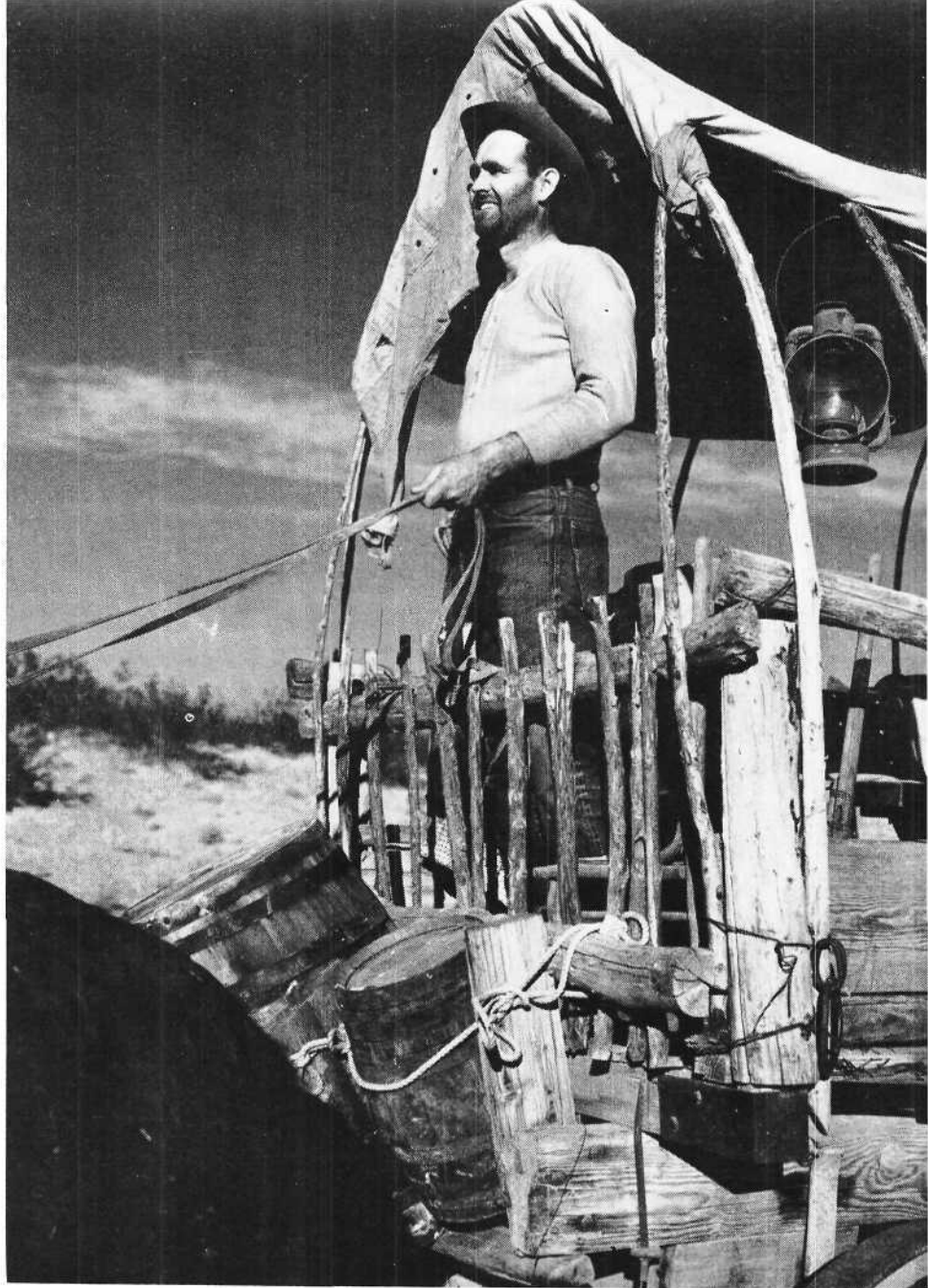
It happened that Calexico and Mexicali were built near the route followed by the trail-blazers and frontiersmen of the pioneering period — De Anza and the Padres Font and Garcés, the California gold-seekers from Mexico, Kearny's Army and the Mormon Battalion, the Butterfield stage — and eventually the engineers and developers who converted the arid Imperial desert into a productive agricultural empire.

The Cavalcade was conceived originally by Calexico people, the script prepared by a committee of local women, and for 12 years the spectacle has been presented entirely by a cast of 350 persons selected from Calexico and Mexicali—with no paid professional talent.

Much of the music and the costuming is in Spanish, for it was the Spaniards who first trekked across this desert region.

On Friday, preceding the first showing of the pageant, 3000 school children of Calexico and Mexicali will take part in an international parade, and on Saturday afternoon a Desert Parade will feature the participants and vehicles which take part in the spectacle.

One of the special features of the



Ernest Cole of Calexico playing the role of one of the wagon train drivers in Desert Cavalcade. Photograph by Padilla Studio.

program is to be a chuckwagon breakfast at 8:00 a.m. Saturday morning at the pageant grounds. This event is open to the public.

Mexican civic groups are planning several special daylight programs for the entertainment of visitors on Sunday, March 23, in Mexicali.

The local organization which sponsors the annual pageant is a non-profit corporation, and while admission is charged to the pageant grounds, all funds go into expenses, and to the purchase of additional equipment and costumes, and toward the improvement of the natural stadium which was purchased two years ago along the great New River canyon which the Colorado carved across Imperial valley in 1905-6-7 when Salton Sea was formed.

Playing leading roles in the pageant are local people, both Mexican and *Norte Americanos*, cast as Juan Bau-

tista de Anza, Fathers Font and Garcés, Lieut. Moraga, Chief Palma of the Yumas, Gen. Kearny and Lieut. Emory; Dr. Oliver Wozencraft, who first saw the agricultural possibilities of Imperial Valley; Capt. St. George Cooke of the Mormon battalion; Charles R. Rockwood, who engineered the bringing of Colorado River water to the valley; C. N. Perry, Dr. W. T. Heffernan, Anthony H. Heber and George Chaffey, all associated with the early development of the Imperial Irrigation district.

A span of 175 years is covered by the historical pageant, and the program, starting at eight in the evening, lasts for two hours. The Winter Festival Association of Calexico, organized 14 years ago to stage the Cavalcade, suggests that those planning to remain overnight in Imperial Valley make their reservations for lodging well in advance.

DESERT CALENDAR

- February 23-March 2 — California Mid-Winter Fair of Imperial Valley, Holtville, California.
- March 1—Indian Tour, Tucson, Arizona.
- March 1-2 — Sierra Club, Southern California chapter, trip to Bear Creek Oasis, near La Quinta, California.
- March 1-9 — Maricopa County Fair and Horse Show, Civic Center, Mesa, Arizona.
- March 1-31—Special Exhibit, sand-paintings of the Hopi and Navajo Indians made by David ViaSenor. Southwest Museum, Highland Park, Los Angeles, California.
- March 2 — Round-up Club tour of Vulture Mine, Wickenburg, Arizona.
- March 8-9 — Sierra Club, Southern California chapter, hike up Murray Canyon, near Palm Springs, California.
- March 9 — Dons Club trek to Lost Dutchman Mine in Superstition Mountains, from Phoenix, Arizona.
- March 9—Bandollero tour to Laguna Dam, from Yuma, Arizona.
- March 9—Desert Sun Rancher Rodeo at Remuda Ranch, Wickenburg, Arizona.
- March 10-16 — Seventeenth Annual Palm Springs Invitational Golf Tournament, O'Donnell Golf Club, Palm Springs, California.
- March 14-16—Gila Bend Rodeo, Gila Bend, Arizona.
- March 15 — Border Conference Ski Meet, Flagstaff, Arizona.
- March 15-16—Western Match Races, Wickenburg, Arizona.
- March 20-23 — International Desert Cavalcade, Calexico, California.
- March 21-23—Phoenix World Championship Rodeo, Phoenix, Arizona.
- March 21-23—Coachella Valley Mineral Society Gem and Mineral Show, Rivers de County Fairgrounds, Indio, California.
- March 23—Dons Club Trek to San Carlos Indian Reservation, from Phoenix, Arizona.
- March 27-29 — Jaycees Rawhide Roundup, Mesa, Arizona.
- March 28-30 — Tucson Livestock Show, Rodeo Grounds, Tucson, Arizona.
- March 29-30—Agua Piedra Ski Carnival, Taos, New Mexico.
- March 29-30 — Don's Club Trek to Grand Canyon, from Phoenix, Arizona.
- March 29-30—Sierra Club, Southern California chapter, natural science trip to Red Rock Canyon, California.
- March 30-31 — Saddle Club Horse Show, Wickenburg, Arizona.



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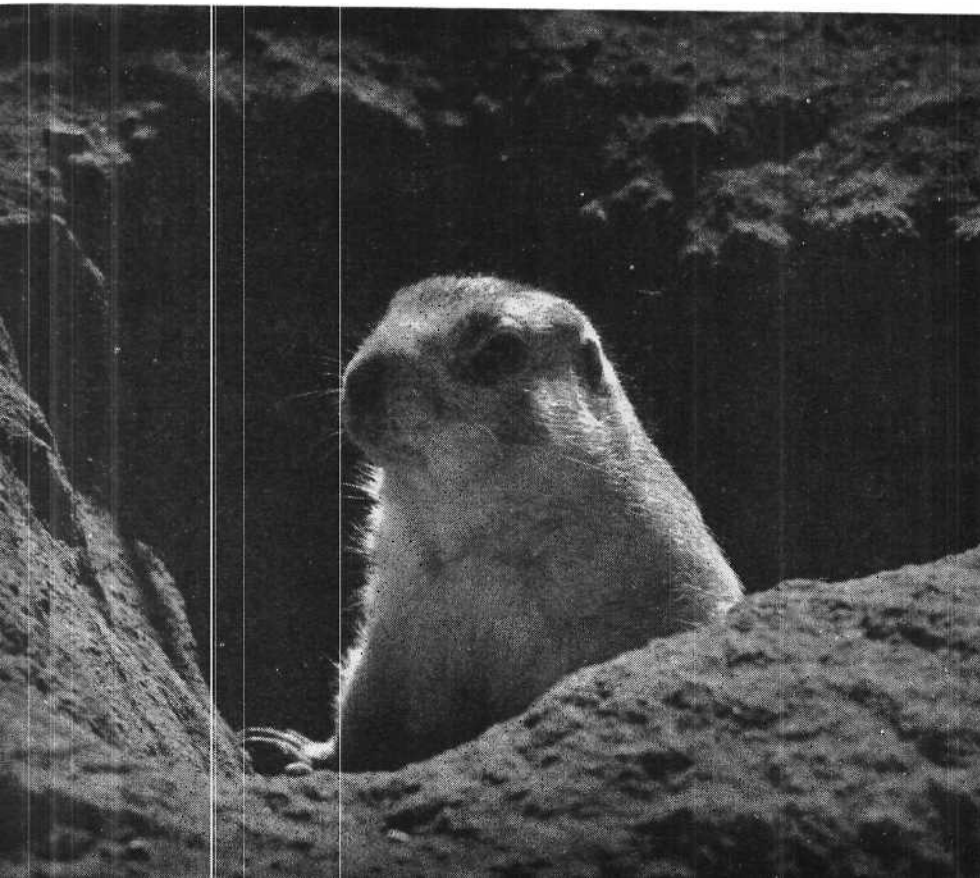
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PICTURES OF THE MONTH . . .

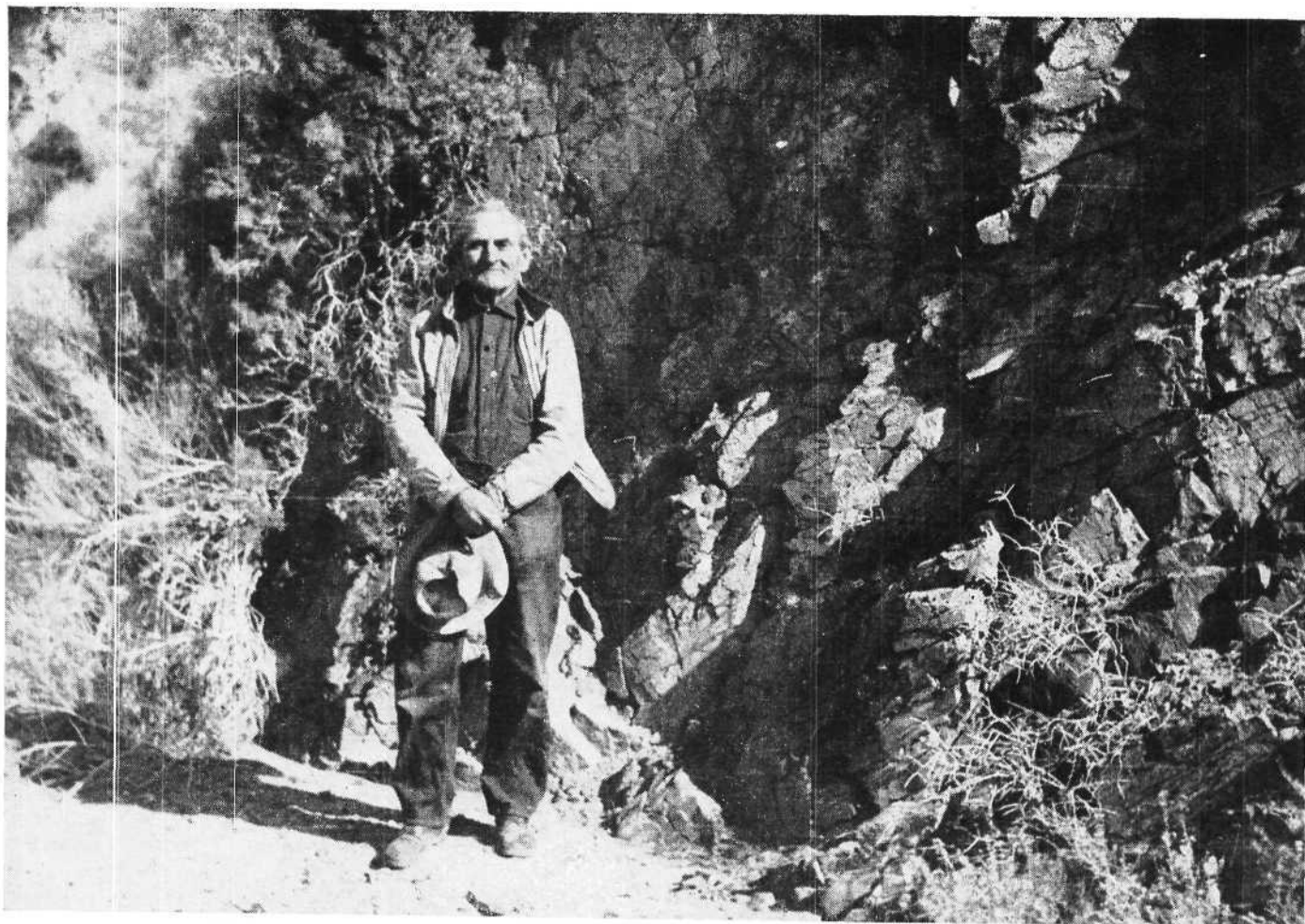


Salton Sea Sunset . . .

Just before the sun disappeared beyond the Salton Sea, N. N. Kozloff of San Bernardino, California, took this picture, a first prize winner in Desert Magazine's photo contest. It was taken with a 4x5 Graphic camera, K-2 filter and Super XX film, 1/25 second at f. 16.

Prairie Dog . . .

Richard Van Nostrand of San Diego, California, was waiting when this inquisitive fellow ventured from his hole. The picture won second prize for Van Nostrand, who used a 3½x4¼ Graflex camera, Plus X film, 1/100 second at f. 11.



Finley Buhn, old-time freighter and present day miner who lives in Goler Heights. Much of the information contained in the accompanying story was supplied by him. Everett Morris photo.

Goler's Lost Gold...

So certain was Prospector Goler that he could return to the spring where he had found nuggets of gold that he stuck his gun on the top of a knoll as a marker. The gun was not found until 50 years later—and in the meantime others had re-discovered and taken a million dollars in wealth from the placer field which Goler had found—and then lost again.

By ADA GIDDINGS
Map by Norton Allen

NEAR THE mouth of Red Rock Canyon, about 20 miles north of Mojave, California, lies the Lazy-M cattle ranch, the old home of the Munsey family. Seven miles south of the Lazy-M my husband and I were homesteading a half section of land in 1917. We frequently enjoyed the western hospitality at the Lazy-M. We listened by the cozy fire of the ranch house to many stories of the early days, for the Munseys were old timers in California—Rhoda, the widowed mother, and Will, her son. They told us the story of Goler's gun and how they found it.

At the age of 64 Rhoda could still mount her cow pony with ease and ride the range all day. One morning she and Will saddled their ponies and rode off to the southeast where a herd of their cattle was feeding.

As they rode along in the crisp air they felt the exhilaration that only a desert morning can give. Anything might happen. To gain a view of the country and their cattle they edged toward the east rim of the valley. Beyond the dunes and mesquites which sprawled at the foot of the rise they topped a low hill and drew rein.

Then something did happen! Dis-

mounting with a whoop Will called to his mother: "Look, mother! Goler's gun!"

"Why, the land of the living! Goler's gun! As sure as fate!" she exclaimed. "Many's the time your father and I have listened to Will Cuddeback tell about his father and Goler. Those two men were partners in mining, you know. Will Cuddeback would say: 'Now remember, Goler left his gun on a little hill somewhere out in this valley and he never found it when he came back later. Watch for it when you ride.' And here it is—lock, stock, and barrel."

Carefully picking up the gun, Will said: "This is it, all right! What a find! All intact, too. Look at the seamy side of the stock! Weather-beaten for 50 years!"

They examined the gun together. The stamp read: "Spencer Repeating Rifle Co., Boston. Pat'd March 6



Top—Goler Heights on the east side of Goler Canyon. Finley Buhn's cabin is at the left. Everett Morris photo.

Middle—Street in Garlock, near Goler's placer field, in the late 1890's. Photo courtesy Frank Latta of Kern County Museum.

Bottom—Cabin at the mouth of Goler Canyon. The richest gravel was found to the left above the roof of the cabin. Everett Morris photo.

18 0." The missing figure was 6, no doubt, as 1860 was the year the Spencer company began to manufacture the guns in quantities for use of the troops in the Union Army. This and many other facts about the gun the Munseys found out later. Will handled the gun gingerly as he mounted. "Let's head the ponies for home," he said. "We can look at the cattle some other time."

During the next few days the Lazy-M was a center of interest to friends and neighbors, ourselves among them.

News of the find soon spread and

we all wanted to see this old relic of Kern County gold rush days. We examined the gun and cartridges carefully, listening all the while to the story of Goler and Cuddeback.

Goler, a German prospector whose first name or initials no one seems to know, came down from Death Valley in 1867 making his way south by way of a little canyon about 40 miles north of Mojave and on the west side of the valley. Kneeling to drink at a spring his eyes widened like his mouth.

Nuggets! He could scarcely believe

it! Gold! After a careful examination of the nuggets he made a quick survey of the immediate surroundings and then hurried on his way. He feared unfriendly Indians.

Goler tried to take a short cut to Los Angeles where idle miners gathered in those days. Ignorant of the lay of the country, he hastily turned across the valley to the east. He should have followed the old road which ran along the spur of the Sierra Nevadas to the west of the valley. The mountains here ran northeasterly. This was new country to Goler. Wishing to travel light he decided to hurry ahead unarmed, but glancing backward he must have asked himself: "Can I find that spring again?"

Afterward he related to his partner that he climbed to the top of a little hill near the east side of the valley and roughly sketched the ridge he had passed coming into the valley on the west side. His map indicated the little canyon which he wished to find again. For further check on the location, he planted his gun upright in the sand for a marker. Then he hurried on. He showed his nuggets to Hefner, a German who ran a stage station at Elizabeth Lake at that time.

It took him many days to reach Los Angeles. He hoped to find someone who had money to back a mining venture. The streets were thronged with miners who came down from the fabulous hills of the Kern River country.

Goler accosted all who would listen to him, showing his nuggets. Most of the miners were skeptical. Among them were some who had turned to agriculture within the last decade. One day Goler met one of these men.

"My name is Goler," he began, "und I hear der men call you Cuddeback vich I say may be good German name, too. Vill you look at my gold, Mr. Cuddeback? It is so good nobody vill belief me ven I say I find it. I know ver it come from but I cannot go alone und I got not enough money. But I left my gun standing in der sand to show der vay und I haf dis map ov der hills." He produced his rough sketch.

"I am a rancher, Goler," stated Cuddeback casually. "but I have panned a little gold in the north. Let's see your nuggets."

Displaying them Golder explained: "I put my head over a little spring to drink und den I see der gold spots near my eyes." He added eagerly: "I can take you to der place. I left my gun on a little hill to show der vay."

"These nuggets are the real thing. I'd like to find a few pockets of these," mused Cuddeback.

"Vell, I can show you ver it is," urged Goler. "You get more men und grub und ve go right away."

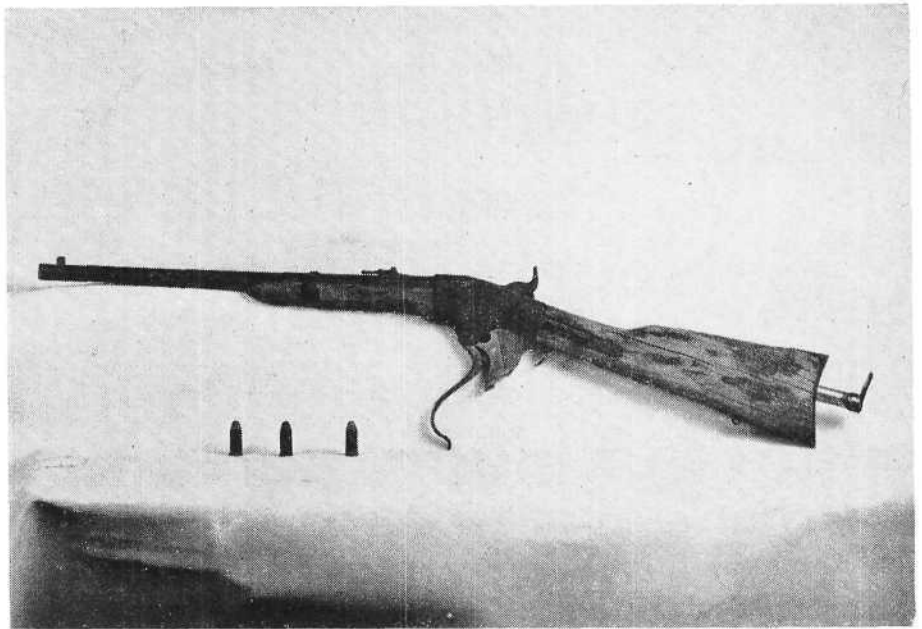
Cuddeback was qualified for leadership. According to historical accounts he was known as a man of hazardous adventures. His full name was Grant Price Cuddeback.

Cuddeback and Goler with a well-equipped outfit topped the mountains at Elizabeth Lake and crossed Antelope Valley as far as Willow Springs, 50 miles short of the spring which they were seeking. The men prospected little canyons to the west with no more reward for their efforts than Goler had in searching for his gun planted somewhere on a little hill. The men ridiculed Goler. Their distrust grew and there were mutterings that boded ill for him.

Cuddeback knew how to retreat as well as advance. He decided to lead the outfit back to Los Angeles and disband, at least for the time being.

There was little to tell of the second attempt which some time later took Cuddeback and Goler as far as Muroc Dry Lake with a new outfit. Here they prospected about 40 miles short of their goal and the waiting gun. Baffled again they turned back to Los Angeles.

Goler held tenaciously to his dream—a gold mine near the spring in the canyon. His map seemed to fit every valley—but a certain little hill with an upright gun would be the marker. His gun would be the key to the canyon! His trusty old Spencer! One cartridge in the chamber and three in the magazine! Would the Indians find it? Would the wind blow it over in the shifting sand?



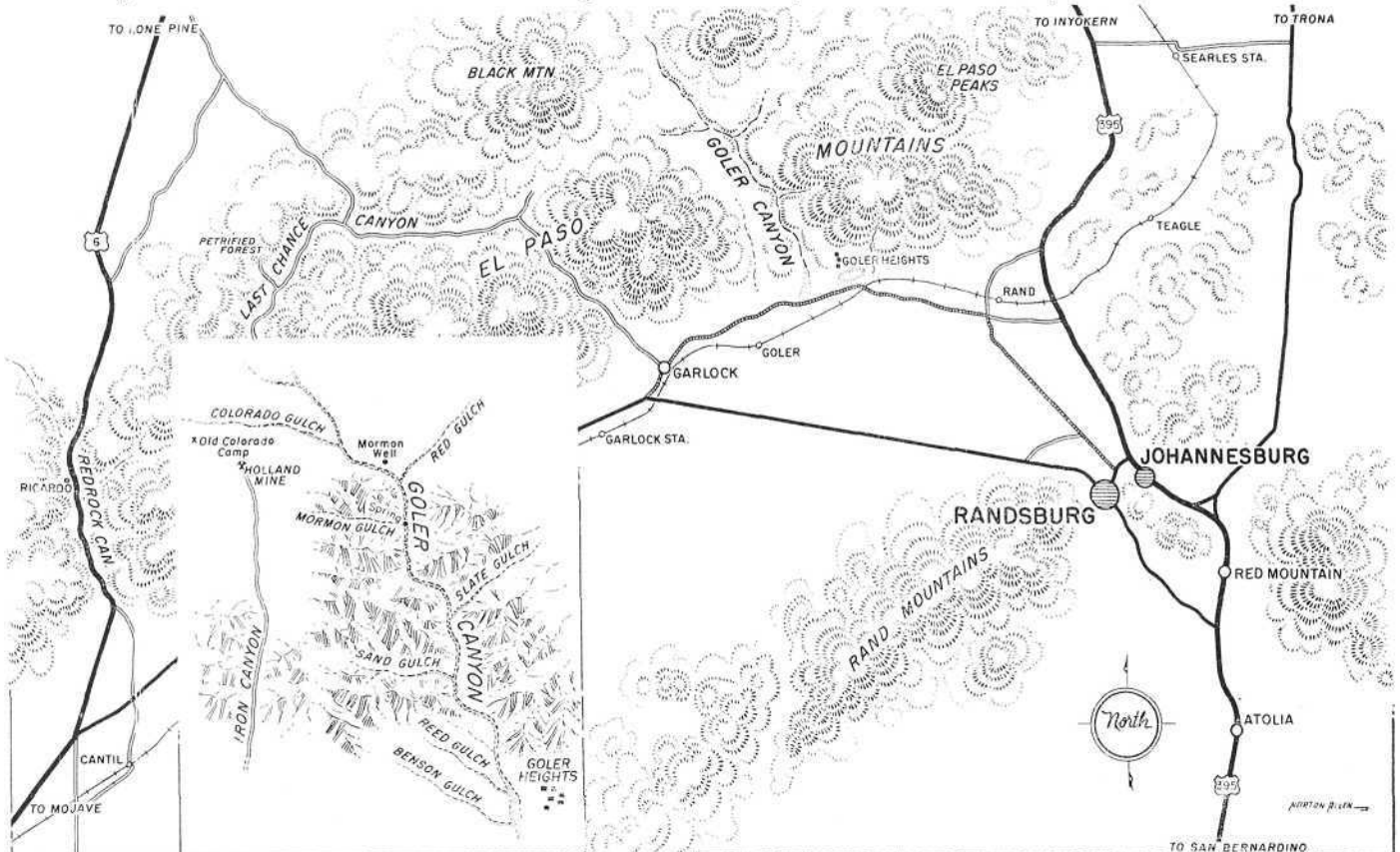
Goler's gun—left as the marker for his new gold discovery and not found until 50 years later. Photo by Amundsen Studio, Bakersfield.

Undaunted by two failures, the partners organized the third outfit which took them to the west side of the valley north of Mojave and on to Red Rock Canyon. Here they struck gold, though the spot that they were seeking lay hidden 15 miles farther to the northeast in another canyon, and the gun lay in the desert sun near the eastern rim of the valley.

Cuddeback and Goler worked their diggings for several years until Goler left that part of the country never to

be heard of again. His old map, in the hands of others, determined the identity of the canyon where he found the nuggets and which later was to bear his name—Goler Canyon.

In 1917, 50 years after Goler found his gold at the spring and lost his gun on the desert, the gun lay in the cautious hands of admirers. The blunt cartridges had been pounded out of shape. Probably they had been carried a long time on horseback. There was one perfect bullet—the one in the



cartridge which was found in the chamber—the other three were in the magazine. They were blunted by bouncing up and down against the bases of the cartridges ahead of them.

On the right side at the butt-plate, the wood was worn down so far that the metal of the tube containing the magazine was exposed. The left side of the butt showed the dry-rot that had developed. It was an interesting old firearm. Will Munsey gave it to his friend Fred E. Borton, an attorney in Bakersfield, who, before his death, presented his whole gun collection to his son, Paul R. Borton of Bakersfield. Both Will and Rhoda Munsey have gone from the fast-thinning ranks of the old timers, Rhoda at the age of 97.

The story of the gun, as told to the writer when visiting the Lazy-M ranch, spanned the years from 1867 to 1917. Between those dates the writer has found similar names in the lists of old settlers recorded in the histories but no mention of the Goler of this story, who convinced Grant Price Cuddeback that he had found a bonanza at a little spring in a canyon. Just what Goler was doing in those years after he left Cuddeback and Red Rock Canyon is not altogether certain. However one old timer remains who can add a word to the story of Goler's lost gold.

Finley Buhn, who lives in a neat little cabin on Goler Heights, was born in the Oak Creek country between Mojave and Tehachapi. He knows the mountains and the Mojave desert and remembers many of the old timers well. Older men told Finley that a few prospectors came to the canyon in the '60s, and it was believed that Goler himself returned. A hand-made pick and frying-pan were found there which indicated his return. The pan was half rusted away leaving the part next to the handle. This meager evidence was probably strengthened by the fact that Finley Buhn's uncle, Jack Kurlitz (better known as Slate Range Jack) told young Finley he saw Goler in the 1870's while freighting with teams and big wagons for Remi Nadeau from Wilmington to the Modoc Mine in Inyo County — a 10-day trip. Slate Range Jack related that as he drove along the El Paso Mountains near what was later named the Goler Mining District, he saw Goler several times with two burros. At other times he picked Goler up, once near Mesquite Springs at the foot of the mountains and not far from Goler Canyon. When Goler displayed some gold Slate Range Jack asked where it came from. Goler pointed to the largest canyon in the area which later was named Goler Canyon. The recounting of this gesture on the part of Goler no doubt confirmed in the minds of the old

timers Goler's return to his bonanza at the spring. Freighter stories traveled fast and far in those days. Also the story of the lost gun had probably been heard over and over at the camps and bars.

In Kern County annals the name Goler became official following another discovery 26 years after Goler's find. This occurred in 1893—called the year of the big discovery. Two men, Reed and Benson, were prospecting the Red Rock Canyon region and found gold near the mouth of Goler Canyon. The news spread. Claims were staked in the main canyon and near its mouth by C. F. Mecham, Frank Yeager, a man named Crumpy, who was one of the most successful miners there, and Charley Shellman whose cabin still stands in the canyon. When the gold rush at this section began, the miners met, as was customary at times of discovery, to form boundaries of the area and make the rules governing same. According to one reliable historian the area was named Goler Mining District. Later, in reports of the State of California Division of Mines on this part of eastern Kern County, the area is referred to as the Goler Canyon Placer District which really establishes the name given to the canyon by the early mine developers, cattle men and other old timers.

The site of the little spring, which is now inactive, is a mile and a half up the canyon just above the Narrows. Mormon Gulch comes in at the Narrows from the left. Further up on the right is Red Gulch and last, on the left, is Colorado Gulch. Below the Narrows toward the mouth of the canyon is Slate Gulch on the east side and Sand Gulch on the west. These canyon gulches which are subsidiary to the main canyon, together with Reed and Benson and Eagle Gulches close to the mouth of the canyon, yielded rich deposits.

In 1894 during a strike on the Southern Pacific railroad, Finley Buhn joined the line of freighters which still crawled up and down the desert valleys. He hauled the first load of lumber to build Van Brieson's store in Eagle Gulch. Goler never was a town. It was a mining district. Finley hauled supplies to Van Brieson's store and to many of the miners, whose gold he delivered in Tehachapi to H. M. Jacobs who shipped the metal to the mint in San Francisco. Sometimes Finley had as much as two thousand dollars worth of gold lying on the floor of his wagon on the trip to Tehachapi. It lay in buckskin bags or barrel-shaped mustard jars labeled with the owners' names. The containers were returned when Finley delivered to the owners the supplies he had bought with part

of their gold dust. His freighting gave Finley a close connection with Goler Canyon and its history. Finley saw a nugget worth almost a thousand dollars which was found in Reed Gulch on "Dynamite" Miller's property which had been leased to another miner. "Dynamite" couldn't cash in on the find. Happy Hogan found a nugget in Benson Gulch which weighed 23 ounces. There were many four, five, and ten ounce nuggets recovered.

For a time, Ed Maginnis (later Judge Maginnis of Randsburg) was Wells-Fargo agent at Garlock which is now a ghost town. Ed stated that \$350,000 worth of gold went through his office. He estimated that more than a million dollars in gold came from the Goler District. Today, Finley Buhn works several of the claims profitably.

No one will ever know how much of this wealth, if any, was recovered by the man who first found the placer field—but the finding of his gun in 1917 confirms beyond all doubt that Goler was the real discoverer of this million dollar jackpot.

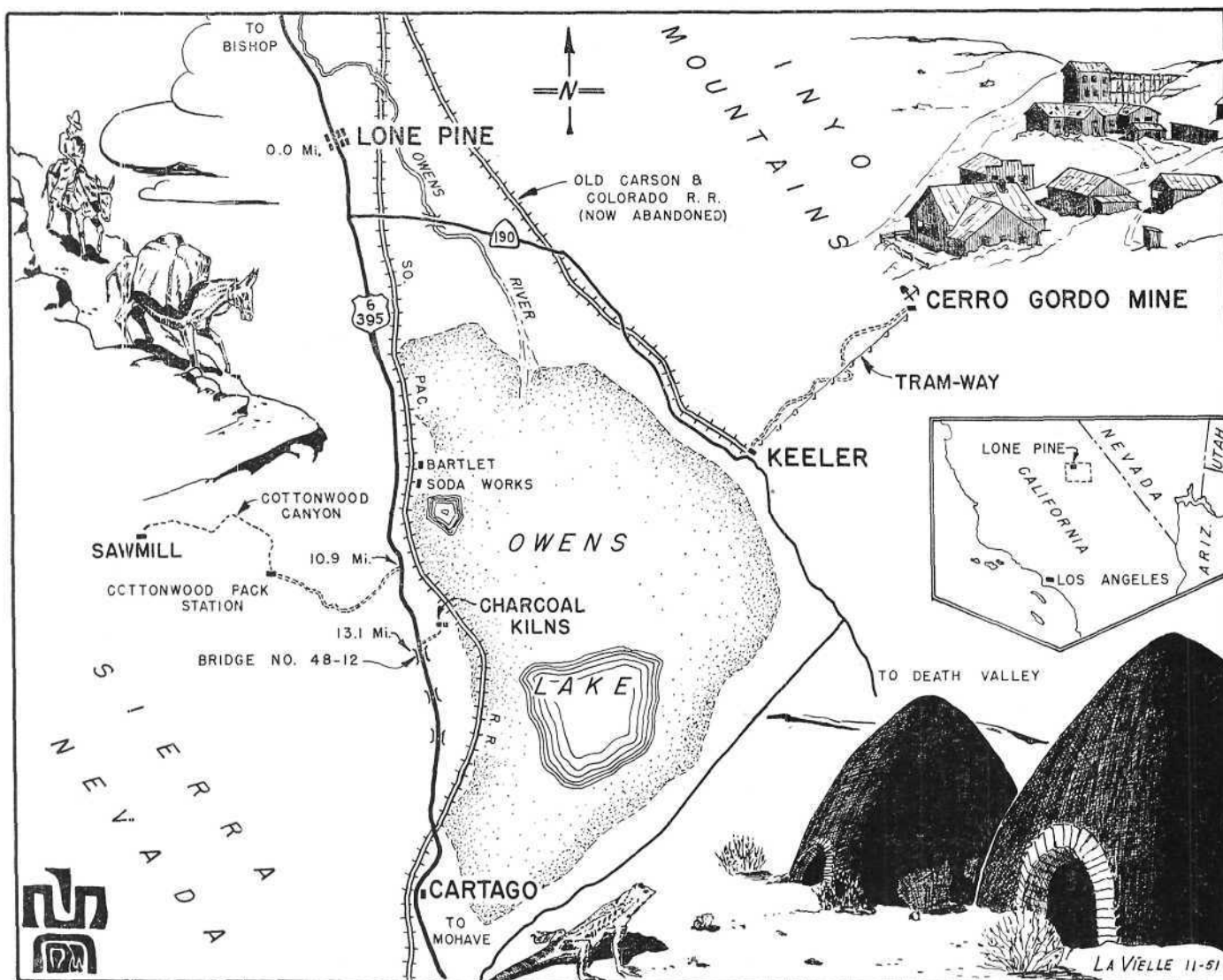
SCIENTISTS PRODUCE NEW, BETTER TORTILLA FLOUR

Science has found a new way to make tortillas, one of the oldest forms of food in the world.

At the request of the Mexican government, nutrition experts in this country have successfully milled an inexpensive, dry and stable tortilla flour from which Mexico's flat, unsalted, unleavened corn cakes can be made with greater ease.

Corn dough cakes have been the basic food of Indian civilizations as far back as history records, and tortillas are the staff of life today for millions of people from the Southwest United States through the Isthmus of Panama. In some remote sections women still grind corn meal on flat slabs of rock called "metates." And, since the soapy-tasting dough will spoil in less than six hours without refrigeration, the entire mixing and cooking process must be repeated for each day's meals. Either the housewife does it, or as is more common in most of Mexico today, she buys it in the moist state from a local *masa* shop or even ready-baked in small *tortillerias*.

To provide a more stable, storable form of the basic tortilla, which could be enriched by vitamins, minerals or protein to fortify the national diet on a wholesale basis, the Bank of Mexico asked the Armour Research Foundation of Illinois Institute of Technology to develop a new way of processing and marketing tortilla mix. — *Eddy County News*.



When Lead Was Mined at the Cerro Gordo

By A. LA VIELLE LAWBAUGH
Map and photos by the author

7N MARCH last year Neva and I followed the steep trail which zigzags up the rugged west slope of California's Inyo Mountains to the ghost of what was once the fabulous lead mine of Cerro Gordo.

Our interest in the Cerro Gordo had been aroused during a previous trip into that region when we saw at Keeler the lower terminus of the old tramway which once brought the rich ore from the mine down the side of the mountain.

The road to Cerro Gordo is a hard one for man and car. There were two grades which almost stopped the car,

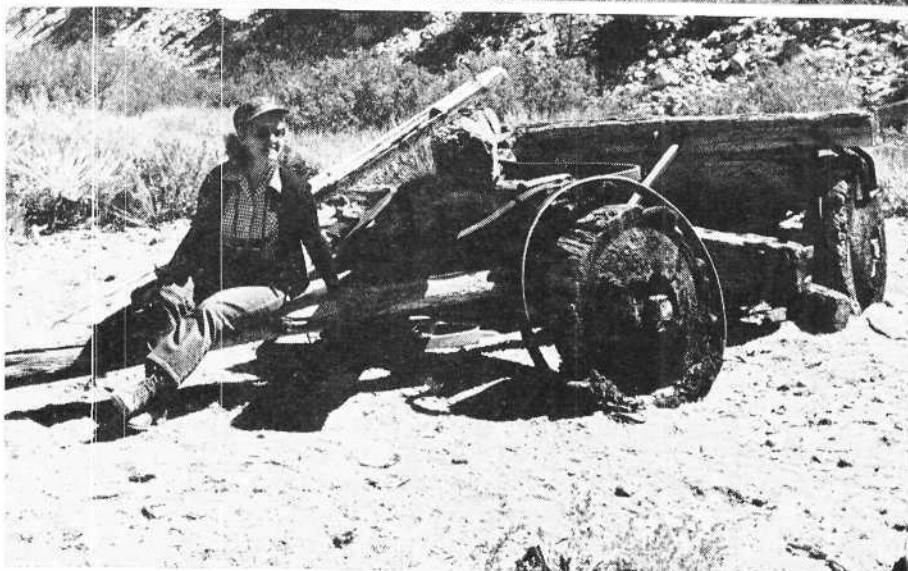
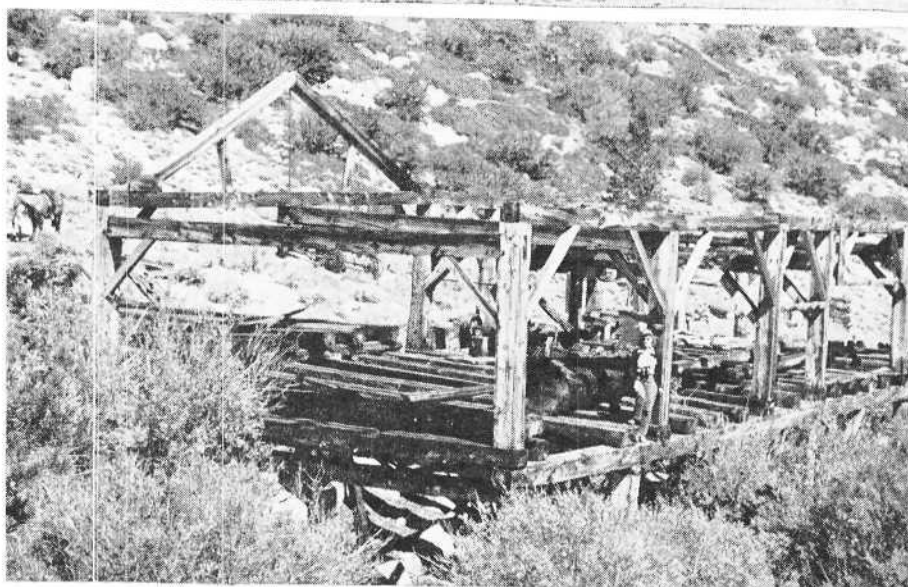
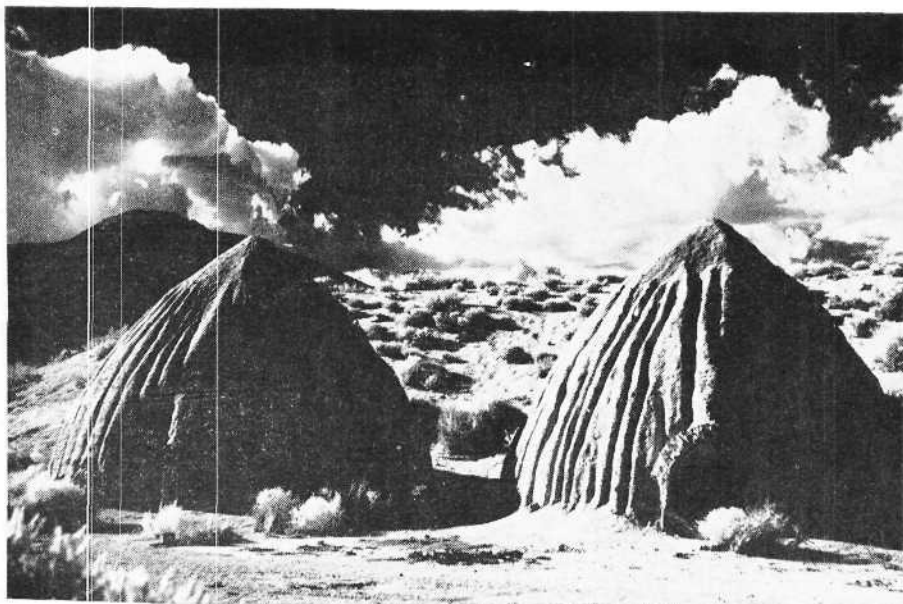
Rich galena ore was found nearly a century ago high up in the Inyo Mountains of California. But before it could be milled and transported to market the mining men of that day had to overcome tremendous obstacles. Here is the story of how those obstacles were met—and overcome.

even in low gear. There was an eighth of a mile where the one-way trail is poised precariously along the top of a sheer cliff.

And when finally we reached the mine we learned that our quest for

the complete story of Cerro Gordo had only begun. Before the story was all recorded in our note books we had searched Owens Lake for rotting steamboats, the shore lines for charcoal kilns—and then a 6000-foot climb to search out an old sawmill high in the mountain range which rims Owens Valley.

The mine is on the western slope near the summit of the Inyo Range. The "fat hill"—Cerro Gordo, in Spanish—is a distinctive landmark just to the north of the mine. A Mexican, Pablo Flores, and two companions first discovered the rich outcrops in the 1860's. The ore occurred as lenticular masses of massive cerussite, 5 or 6 feet across, in the limestone. These masses were concentrically banded and usu-



Top—These adobe kilns were built to make charcoal for the old Cerro Gordo mine.

Center—All that remains of the saw mill from which came Cerro Gordo's lumber and charcoal.

Bottom—Neva Lawbaugh rests on the tongue of one of the ancient logging wagons high up in Horseshoe Meadow.

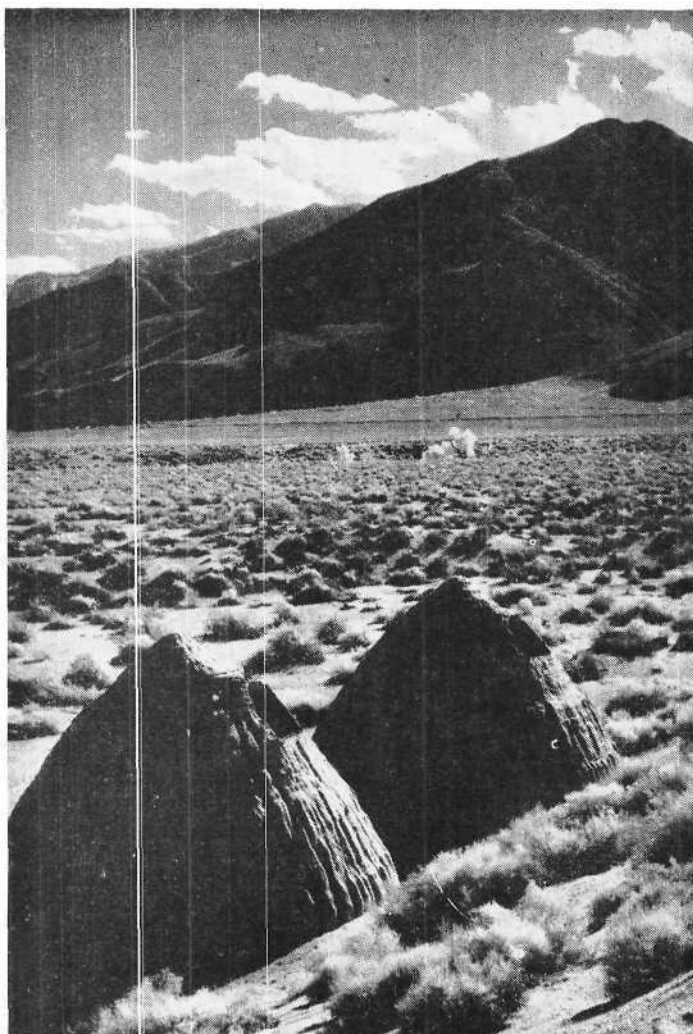
ally contained a small core of unaltered galena. To smelt this rich ore, Flores employed *vesos*, which were crude rock furnaces. As in the case of all bonanza strikes, word leaked out and soon the Mexicans had company and before long were shunted aside. The rush was on. Claims were staked, bought and sold, and blood was spilled. Almost overnight, Cerro Gordo boasted a population of 700 and within a few years had climbed to over 2000! Buildings mushroomed, despite the high cost of lumber. Gambling and dance hall girls provided the lusty night life portrayed in western movies.

Today, only a few buildings are clustered on the steep slopes. We pulled our over-worked car to a halt in front of the building which formerly served as a recreation room for the miners. Most of the furnishings are gone, but the overhead wires, with counter heads for snooker pool are still there. The caretaker greeted us hospitably and gave us water for the car and coffee for our own refreshment.

We learned that the present owners of the mine employ a crew of 12 in an effort to locate an elusive rich vein. Sons of the owners, Steven Wasserman and Christopher Reynolds, were the two unfortunate lads who later in the year lost their lives trying to scale the treacherous east face of Mt. Whitney. Our host told us of handmade digging tools, relics of another day, which had been found in the 27 miles of underground tunnels and stopes. Some of the levels go down to 900 feet. We saw an old candle end of sheep's tallow which had come from a ledge far below the surface.

The building which houses the mine end of the tramway is still standing. This spectacular ore conveyor was built in 1911 by Louis D. Gordon who found large deposits of zinc which earlier miners had ignored in their quest for silver. The tram is about six miles long and is said to have cost \$250,000. It is operated by gravity, with ore buckets hanging from steel cables. As the loaded buckets dropped down to Keeler, the empties were drawn back up to the mine. A huge brake wheel is at the mine terminal of the tramway.

The steep slopes around the mine are dotted with little leveled plots where houses once stood. Foundation rocks, old iron bedsteads and scraps of weathered wood are all that remain. For more than an hour we walked the indistinct old streets and foot-paths of Cerro Gordo. A mile distant, at the old Chinese cemetery, we recalled the China Stope incident. A Chinese crew was working below the 200 foot level, when a cave-in buried a number of



Fire bricks were brought in to line these adobe kilns for Cerro Gordo's charcoal.



Tramway of the old Cerro Gordo mine at Keeler. Inyo Mountains in the background.

them alive. They had neglected to timber-up properly.

There are structures still standing at the mine which ante-date the Gordon era. A tall chimney affair built of native stone attracted our attention. Upon examination, it proved to be a smelter. Our host told us that it was one of those built by M. W. Belshaw who was one of the first white men to move in after the discovery by the Mexicans. A silver smelter required charcoal in those days and lots of it. Neva and I had seen where many buildings had stood but didn't give much thought to the wood from which they had been constructed. Now here was a place which had consumed prodigious amounts of charcoal. Charcoal must be reduced from wood in special ovens or kilns. Where did the old miners get their wood, their lumber? In all the Inyos there is nothing larger than scrub growth, for they are a desert mountain range. The caretaker could not answer the question, but told us of some old timers at Keeler and Cartago who might know the answer.

The eight-mile drive back to Keeler was in sharp contrast to the difficult

struggle up the grade. Twilight was approaching. The dry bed of Owens Lake seemed to cover the whole valley floor. At one place, where the tram soars high above the road, we paused to watch a bighorn sheep. He was high on the ridge next to the out-stretched stanchions which hold the tram cables. I focused the field glasses on him and he was watching us. After a minute, he casually turned and dropped from sight beyond the ridge. We camped on a bench above Keeler and enjoyed to the fullest a cool, quiet desert night and gazed at at least a million more stars than we ever see when at home in Los Angeles.

The next day was full of surprises. In running down the origin of the timber which had been used for charcoal production and lumber we talked to several of the older residents of Keeler. The first woman we questioned wasn't sure about the timber but was eager to tell us about the steamboats! There actually were steamboats which sailed the coffee-colored water of Owens Lake's nearly saturated solution of salt and alkali! Belshaw's outfit which operated the Union Mine at Cerro

Gordo was producing so many 80-pound bullion bars, shaped like loaves of bread, that they began to pile up. To speed their shipment, the *Bessie Brady* and the *Mollie Stevens* were built to haul the bullion from Keeler across the lake to Cartago. The steamers were shallow draft, clam-shell bottom, ferry-type boats. They lugged tons daily and still the stacks of silver mounted. Late-comers, beset by the shortage of living quarters resided for a time in hutches made by stacking the ingots as walls and covering over the top with canvas or boards. On return trips the boats carried equipment, charcoal and lumber from the west shore of Owens Lake.

The old east shore landing which the steamers used is about half a mile north of Keeler. We searched all the day for evidence of old hulls, boilers, anything which might prove the story. One old-timer led us to a spot on the north shore where the *Bessie* had grounded after a hard blow on the lake. We found nothing but drifted sand, a horned toad, two leopard lizards and lots of creosote bushes. Another informant, William Isbester,

recalls that when he first visited Keeler, the *Bessie Brady* was a burned out hulk, still at the old wharf. This old ship was launched in 1872, was 85 feet long, 16 feet in beam and powered by a 20-horsepower engine. Her cost was reputed to be \$10,000. Records show that Belshaw also was in the steamer business for he launched the *Mollie Stevens* in 1877. Her engine was supposed to have come from the U.S.S. *Pensacola*. Since our search, a Lone Pine lad found one of the old anchors. It was hand-forged, about five feet long and weighed 400 pounds. Further excavation is planned for the recovery of other parts of the old steamer. This digging may be done with enthusiasm for one of the boats was reported to have sunk with a load of bullion aboard.

The next day on the west shore of the lake we found the old bee-hive shaped charcoal kilns. The enterprising Belshaw also built the kilns. Fire brick was hauled in and laid. The exterior was covered with adobe, which during the ensuing years has eroded away. There are two of them, each about 20 feet high and 20 feet in diameter. We discovered them after some difficulty, for their adobe finish

came from the very ground upon which they stand. A perfect camouflage. As I stooped to go inside one of the kilns, a gridiron-tailed lizard darted from its sunning position in the entrance-way.

While sitting on the slope of the ridge behind the kilns we saw a most curious thing. Neva was first aware of it and quietly motioned to me. Two gridiron-tailed lizards were moving back and forth towards each other in a graceful circling motion. It must have been a sort of courtship, for they continued the odd dance for some time, back and forth with a weird rhythm. They scampered swiftly to cover when a red-tailed hawk swooped low overhead.

The cord wood which went into the kilns, and the lumber used for construction came from high up in Cottonwood Canyon. A sawmill was built at the east end of Horseshoe Meadows at the 10,000 foot level. Beams as large as 4x12 inches and cord wood of varying sizes were cut and dropped into a flume for the rip-roaring ride to the edge of Owens Lake, 14 miles away.

Dusk found us at Leo Rogers' pack station in Cottonwood Canyon. Water

flows down the canyon until it is lost in the desert sands. We camped by the little stream that night, after arranging for two horses for the morrow's climb. The raucous cries of blue-jays awakened us. By the time we had breakfast and cleaned up camp, Leo was there with the horses. The climb from the pack station to the mill is about 6000 feet. Along the way we saw remnants of the old flume. It was a V-shaped trough, with sides about two feet high.

I had expected to find some timber at the mill site. Actually, the logging was done three miles further up the canyon. A stream which flowed down the canyon had been dammed and a 30-inch pipe from the headstock under a 20-foot pressure head furnished power to drive the large circular saw. One of the old logging wagons stood near the mill—a ponderous affair with thick cross-cut sections of logs for wheels.

Our story was now complete. We had explored the desert floor and the mountain rims to verify the facts about a highly productive mining venture of nearly a century ago. The Cerro Gordo is said to have produced millions in lead and silver and zinc—but back of that fortune were stalwart men who overcame tremendous obstacles to mine and market the ores which Nature had created there.

• • •

DINOSAUR QUARRY WORLD'S LARGEST FOSSIL DEPOSIT

In northeastern Utah, where the Green River emerges from the slashed gorges of Split Canyon, a 200,000-acre area contains the stone mausoleum of some of Utah's earliest residents.

Dinosaur National Monument contains one of the largest deposits of prehistoric animals in the world. Fossil bones of the giant lizards that once roamed the Uintah Basin lie exposed in the upturned rocks or buried in the massive strata.

The National Park Service has announced plans to expose partially several of these skeletons just as they are found in their rocky burial ground. This work, however, is tedious and expensive and will require painstaking cleaning and scraping with dental tools in hard sandstone.

Scientists believe it was the dinosaurs' lack of intelligence which brought about their disappearance. Their brains weighed not more than three or four ounces, and of this only one-third was the cerebrum, or thinking portion. When, after an estimated 120,000,000 years on earth, the prehistoric lizards were trapped in the quicksands of ancient rivers, they were unaware of their danger and died in the swirling eddies of "tieter sands."

Prizes for Camera Pictures...

During the next two months many parts of the desert will be ablaze with wildflowers—there is the promise of the most colorful floral display on the dunes and mesas since 1949. This will be a rare opportunity for the camera fans, not only to secure flower pictures but also to secure landscapes, human interest, ghost towns, sunsets, wildlife and other photographic subjects for *Desert Magazine's* Picture-of-the-Month contest.

Desert Magazine's Picture-of-the-Month contest is designed to secure for publication the best of the pictures taken in the desert country each month by both amateur and professional photographers. All *Desert* readers are invited to enter their best work in this contest.

Entries for the March contest must be in the *Desert Magazine* office, Palm Desert, California, by March 20, and the winning prints will appear in the May issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

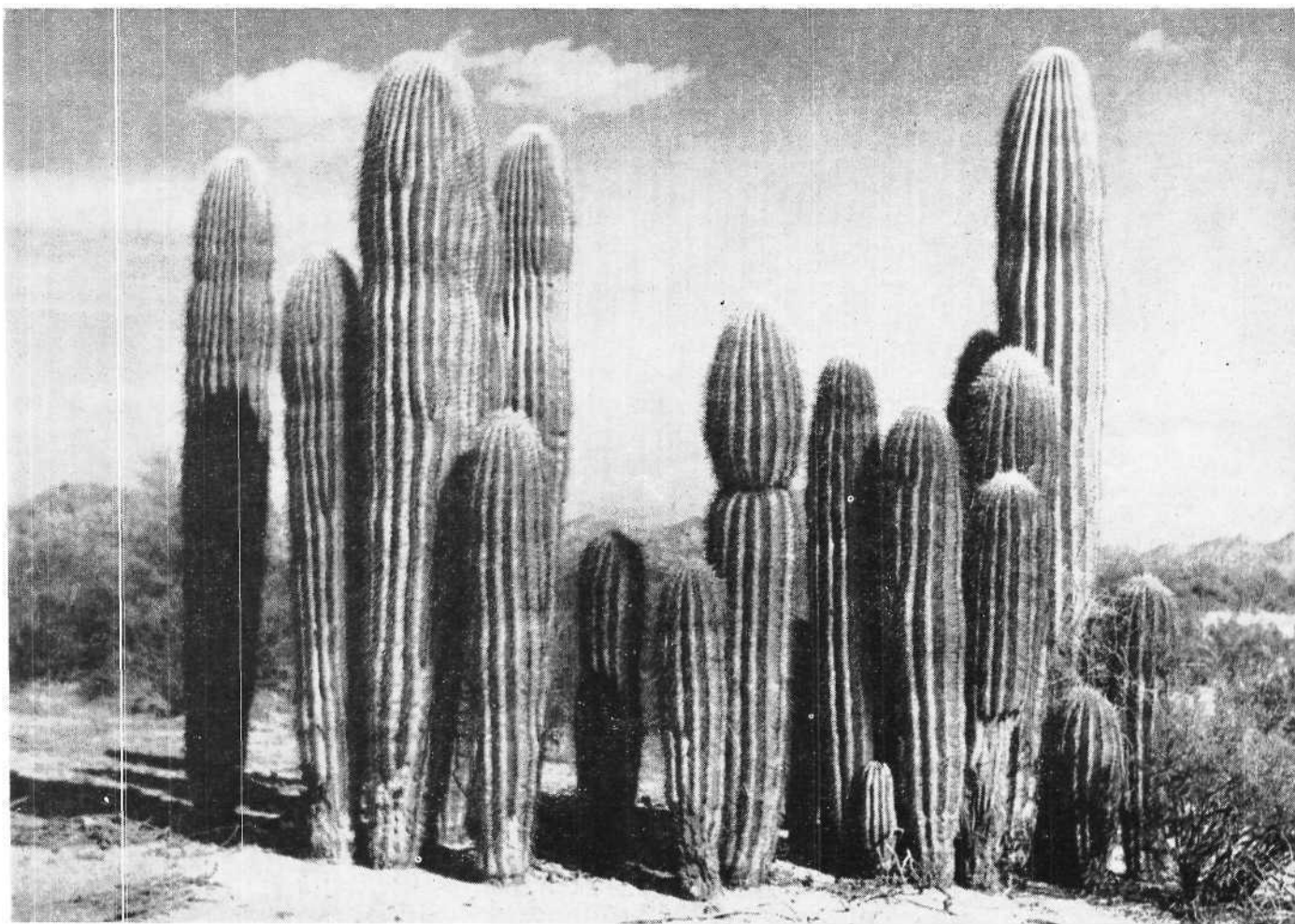
HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the *Desert Magazine* office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. *Desert Magazine* requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from *Desert's* editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA



Photograph taken by Moulton B. Smith.

Saguaro Family in Arizona

By MOULTON B. SMITH

IN A SECLUDED little valley on the northwest side of the Estrella Mountains in Arizona, my wife and I discovered a rare grouping of saguaro cactus. In a space twelve feet long and four feet wide there are 30 healthy saguaros. The tallest of the group is nine feet high; the smallest 14 inches.

Dr. W. Taylor Marshall, director of the Desert Botanical Garden at Tempe, tells us that he has never before known of so many cacti of this species growing in one group.

As we were able to construct the story, it appears that originally there had been a large Palo Cristo tree growing on the spot. Birds, eating the saguaro fruit, roosted in the Palo Cristo and dropped the seeds. In time baby saguaros sprouted in the leaf mold under the tree and sent forth their wandering roots in search of all possible moisture and plant food. The mother tree, deprived of its life-giving moisture and food, eventually gave up the struggle and died.

Observing the rugged thorn-protected trunk of a mature saguaro one would never suspect that during the first few years of its life it is a delicate sensitive little plant. Not wholly unlike a human baby, in order to survive those first years of life, it must have careful nursing and sheltered environment.

At one year of age a baby saguaro is no larger than a small marble and has no spines. Many hundreds of them sprout to life on the open desert, but when the scorching summer sun beats down upon them, their delicate bodies shrivel and die. Only the babies that are fortunate enough to be born under a Creosote bush, a Palo Cristo, Palo Verde, Ironwood or some other hardy desert tree, can hope to survive the rigors of life to which all desert plants are subjected.

At one foot in height a saguaro is approximately 25 years old; at nine feet, about 125 years.

Originally there were 32 living saguaros in this group but two died after reaching 24 inches in height.



Norman Nevills, on the right, and Jack Kuehn, cameraman for 20th Century Fox, on the river trip described in the accompanying story.

Boat Trip on the San Juan

Navigation of the San Juan River to its junction with the Colorado River is never a dull experience, and here are the highlights of a boat trip which involved more than the usual adventures. This story by Walter Koch is one of the prize-winning experiences entered in Desert Magazine's Life on the Desert contest in 1951.

By WALTER H. KOCH

DURING THE last 15 years, many boats have run the San Juan River below Mexican Hat, Utah, and have conquered its boiling sand-waves and treacherous rapids. Seldom, however, did a trip meet with such obstacles and excitement as the one Norman Nevills and I were planning that parching day in July, 1944. We were sitting in his rustic living room at Mexican Hat, talking about old gold placer diggings along the San Juan River.

He showed me a prospector's gold pan—one-half the size of the standard pan—which he had picked up at Zahn's Camp. My curiosity was aroused as this type of pan, which many old-

timers preferred to the heavier pan, is a rare find nowadays. When I asked him about roads leading to this place, he answered:

"Walt, why do you want to fight all that sand on the Navajo Indian Reservation when you can reach these diggings by boat so much easier? In September, I am taking a moving picture party down the San Juan and Colorado Rivers as far as Lee's Ferry, Arizona, and there will be room for another passenger. How about it?"

So, here I was back at Mexican Hat on September 17 listening to an illustrated lecture Norman was giving our party on the evening before the take-off. This group was made up of Jack

Darrock, editor of Fox Movietone News; Jack Kuehn, cameraman for Twentieth Century-Fox; Ray Ziess, his assistant; Al Buranek, Utah state geologist; Frank O'Brien, publicity director of Utah; Lynn Lyman, boatman from Blanding, Utah; and myself, a mining engineer for the United States Bureau of Land Management.

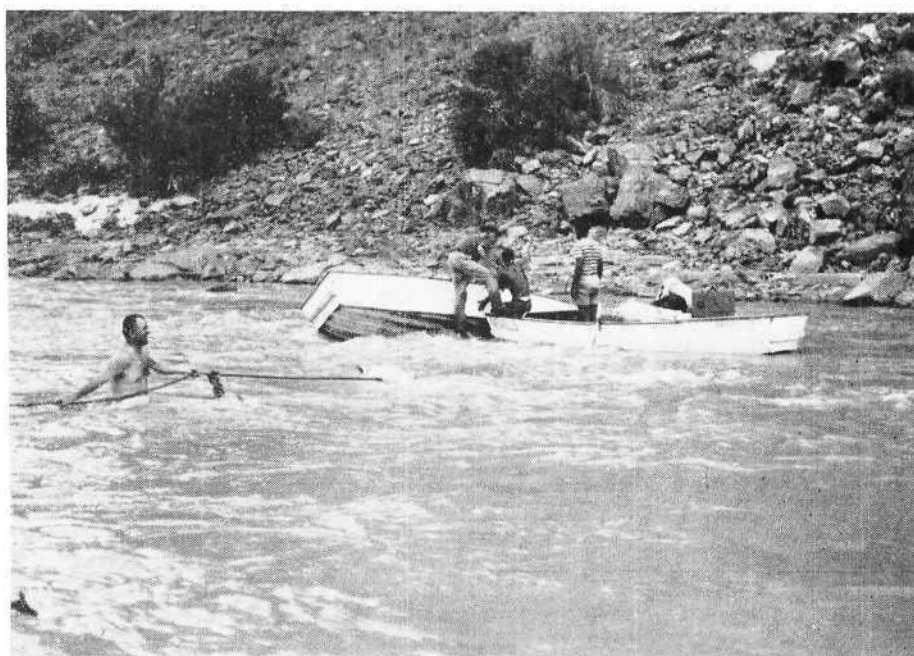
Norman was telling us about the Stanton Expedition which, before the turn of the century, surveyed a railroad grade down the Colorado River, and of other early explorers who had lost their boats and even their lives in the rapids of that river. He went on to say that Piute and Thirteen and One Half-Foot Rapids on the San Juan

River were as tough as any of the feared cataracts on the Colorado, particularly at the low water stage that we would have to contend with. After the show, I remarked to Al, "Norm is promising us an exciting trip. He is a good salesman, but judging from what I have seen of the San Juan, I doubt whether he can deliver the goods."

The next morning, our three boats, all built by Norman, were gliding through the famed Goosenecks of the San Juan. The scene was one of complete serenity. About noon, we reached our first set of rapids. An assortment of cameras, moving and still, were shooting the passage of the boats through the foaming and churning waters. Thanks to Norman's explicit instructions, even Al, who had never run a rapid before this one, came through in the *Rainbow Trail* without even scratching its paint. Thus, my confidence in his seamanship—I was a passenger in this boat—rose perceptibly.

Later that day we hit a bit of river studded with many rocks. They were barely visible above the surface of the water. A few were totally submerged, and one of these proved to be a temporary obstacle in the path of the *Rainbow Trail*. While Jack Darrock and I were frantically pushing with arms and legs against the rock and Al was thrashing the water with his oars, the *San Juan*, skippered by Lynn, passed us in a majestic glide. His passengers, Jack Kuehn and Ray, were giving us their friendly and not so friendly advice on how to get out of our predicament, but their glee was of short duration. For we had just succeeded in freeing our boat when we saw them in trouble about a quarter of a mile downstream. Their boat had slid up a ramp-like submerged rock and was pinned against it cross-wise by the swift current. The *San Juan* had a considerable list with the upstream gunwale submerged. Soon bed-rolls and clothing were floating down the river.

Before we could think of a rescue plan, the current had swept us by, but we were able to land our boat on the north bank just below. A rope was thrown to the stranded *San Juan*, and Jack Darrock attempted to wade and swim across by holding to the rope. The current, however, was so strong he had to give up this plan. In the meantime, Norman, whose boat, the *Hidden Passage*, was in the lead, had picked up most of the floating debris and had landed on the north bank. He dashed up the shore to where we were standing, jumped into the *Rainbow Trail*, and began rowing upstream towards the helpless *San Juan*. With the oars bent almost to the breaking point and his arm muscles bulging like



Above—Nevills running one of the boats through the rapids of the San Juan.

Below—Salvaging grub and equipment from the *San Juan* when it became stranded on a submerged rock.

those of the legendary Popeye, Norm inched his boat forward against the mighty current and, after a tense quarter of an hour, made contact with the marooned boat. After its cargo had been transferred to the *Rainbow Trail*, the men succeeded in refloating the *San Juan* and bringing it ashore.

By that time everybody was willing to call it a day, so we made camp a half mile below the scene of the accident and took stock of the losses. One of the moving picture cameras and a tripod were unaccounted for, a considerable footage of film had been spoiled by seepage, and it seemed that Ray's shoes would probably reach Lee's Ferry long before their owner.

While dinner was cooking, Norman and Al went back up the river and, by feeling along its bottom, located the missing tripod. Their triumphant return somewhat raised the spirits of the gloomy crowd.

Along the river's edge, there was insufficient room for all of us to spread our beds, so Frank and Ray decided to sleep on a level spot among the rocks higher up the bank in spite of Norman's warning against rattlesnakes. Most of us had already dozed off, when suddenly the peace of the desert night was disturbed by a yell, followed by language typical of an irate Brooklynite. We soon learned that Frank had let out some surplus air from his rub-

ber mattress and Ray had mistaken the hiss for an unfriendly greeting by a snake! Then he decided that his bunk among the rocks might not be so safe after all and spent the rest of the night bedded down in one of the boats where only a water snake could have shared the warmth of his bedroll.

This first day proved to be the most exciting one of the whole trip. In spite

of a blue heron, the traditional omen of bad luck for river men, which accompanied us for several days, there were no more mishaps. Nevertheless, our passage through the so-called "Piute Farms" was not easy. Here the river spread out over a mile-wide bed, and for many arduous hours we pushed and dragged our boats over sand bars barely covered with water.

Approaching the Navajo Mountain region, we found that several tributaries break into the canyon of the San Juan from the south. The debris they carry during summer cloudbursts has been deposited at their mouths thereby creating formidable rapids in the river. Piute Rapid, the first of these, was negotiated without difficulty, although Norman decided to take all three boats through it, himself. At Thirteen and One Half-Foot Rapid, lying at the mouth of Beaver Creek, we were forced by low water to portage all our gear and equipment around it. With great skill, Norman guided the three empty boats between jagged rocks, down rushing chutes, and through boiling eddies. Here is his own description as entered into the log of the trip: "It's a wild ride, necessitating a sharp bank at one point to get around a big rock. All goes well, I land last boat safely and join others in carrying the equipment."

Then the junction of the San Juan with the mighty Colorado! The following three days of our journey, we floated lazily through Glen Canyon past Sentinel Rock and Outlaw Cave, landmarks named by the early river explorers. We noted a few stakes set by the Stanton Expedition which had survived more than 60 years of exposure to the elements. The Utah-Arizona state line was crossed soon after we passed the Crossing of the Fathers, where Father Escalante and his intrepid companions had found a way to get across the river on their return trip to Santa Fe in 1776.

At Lee's Ferry, we were rewarded for the hard work which the low stage of the San Juan had caused us at the Piute Farms. For here, the low level of the Colorado had exposed a rare sight—the remains of the steamboat which once plied between Lee's Ferry and a coal mine located in Warm Spring Canyon, a small upstream tributary of the Colorado. Gold placering was carried on near the ferry around 1910, and fuel for running the machinery had to be brought in by wagons from the mines near Cedar City, Utah, more than 100 miles distant. Thus, when a coal seam was discovered in Warm Springs Canyon, someone decided to utilize this coal. The parts for a small steamboat were freighted in overland and assembled at Lee's Ferry. The boat, however, made only two round-trips. It developed that most of the coal carried downstream to the ferry was consumed on the return trip to the mine against the strong river current. So, here she was rotting along the river bank; but it was a real thrill for us rowboat men to walk on the deckplanks of a genuine steamship with boiler, sternwheel, and pilot house.

Desert Quiz

Here's another "quiz expedition" into the Great American Desert. In this list of questions you will find considerable geography, some history, a bit of botany and mineralogy, and some of the lore of the desert country. Regular readers of *Desert Magazine* should make a high score for all the answers have appeared in these pages at one time or another. A score of 12 to 14 is fair, 15 to 17 is good, 18 or over is excellent. The answers are on page 40.

- 1—A chuckawalla lizard has — Two feet..... Four feet..... Six feet..... Crawls on its belly.....
- 2—A mano was used by the Indians to—Kill game..... Offer prayers to the gods..... Grind seeds..... Heal the sick.....
- 3—In locating a mining claim the notice of location should be placed—At point of discovery..... At all four corners..... In the center of the claim..... On the nearest mountain peak.....
- 4—The wild century plant that grows in the desert is—Yucca..... Cactus..... Palm..... Agave.....
- 5—Magnus Colorado was a chief of the—Apaches..... Navajos..... Yumas..... Utes.....
- 6—Going from Kingman, Arizona, to Las Vegas, Nevada, by the most direct paved route you would cross the Colorado River on—Davis Dam..... Hoover Dam..... Parker Dam..... Bridge at Topoc.....
- 7—"The Goosenecks" are in the — Colorado River..... Green River..... San Juan River..... Little Colorado River.....
- 8—Betatakin is the name of—A Hopi chief..... Ceremonial god of the Navajos..... A river in Nevada..... An ancient Indian cliff dwelling.....
- 9—Bill Williams River in Arizona was named for a famous—Colorado River steamboat pilot..... Stage driver..... Army officer in the Apache wars..... Mountain man and trapper.....
- 10—Gran Quivira National Monument is in—New Mexico..... Arizona..... Utah..... California.....
- 11—According to legend the Lost Dutchman mine in Arizona is located in—The Harqua Hala Mountains..... Camelback Mountains..... Superstition Mountains..... Chiricahua Mountains.....
- 12—Going south from Tucson into Sonora, Mexico, you would cross the international border at—Douglas..... Nogales..... El Paso..... San Luis.....
- 13—The Indian Inter-Tribal Ceremonial is held annually at—Holbrook, Arizona..... Gallup, New Mexico..... Window Rock, Arizona..... Flagstaff, Arizona.....
- 14—The blossom of the Saguaro cactus is—Crimson..... Brown..... Creamy white..... Purple.....
- 15—Wayne Wonderland is a scenic area in—Utah..... Nevada..... Arizona..... New Mexico.....
- 16—The Tribal lands of the Cocopah Indians were located—On the shores of Pyramid Lake in Nevada..... In Death Valley..... In northwestern New Mexico..... At the mouth of the Colorado River.....
- 17—Most of the wealth found in the mines at Tombstone was—Silver..... Gold..... Copper..... Tin.....
- 18—William Lewis Manly crossed the desert as a member of—The Donner Party..... The Jayhawker Party..... The Mormon Battalion..... Beal's Camel Caravan.....
- 19—The state capitol of Utah is in—Provo..... Salt Lake City..... Ogden..... Logan.....
- 20—One of the following Passes does not lead into Death Valley—Daylight Pass..... Jubilee Pass..... Towne's Pass..... San Geronio Pass.....



Photograph by Josef Muench

Death Valley--in 1849

By E. A. BRINSTOOL
Los Angeles, California

Sun—silence—sand, and dreary solitude!
Vast stretches—white—beneath a glaring
sky,
Where only those stout-hearted may intrude,
With Death to harrass them and terrify!

A vast expanse of endless, treeless plain,
Where sluggish rattlers crawl, and brown
swifts run,
Where all the parched earth gasps and pants
for rain,
And overhead a maddening, molten sun!

Dry, powdery sagebrush seas, and cactus-
beds,
And yuccas — snow-white sentinels that
gleam,

While here and there the ocotilla spreads.
And waters glimmer from a phantom
stream!

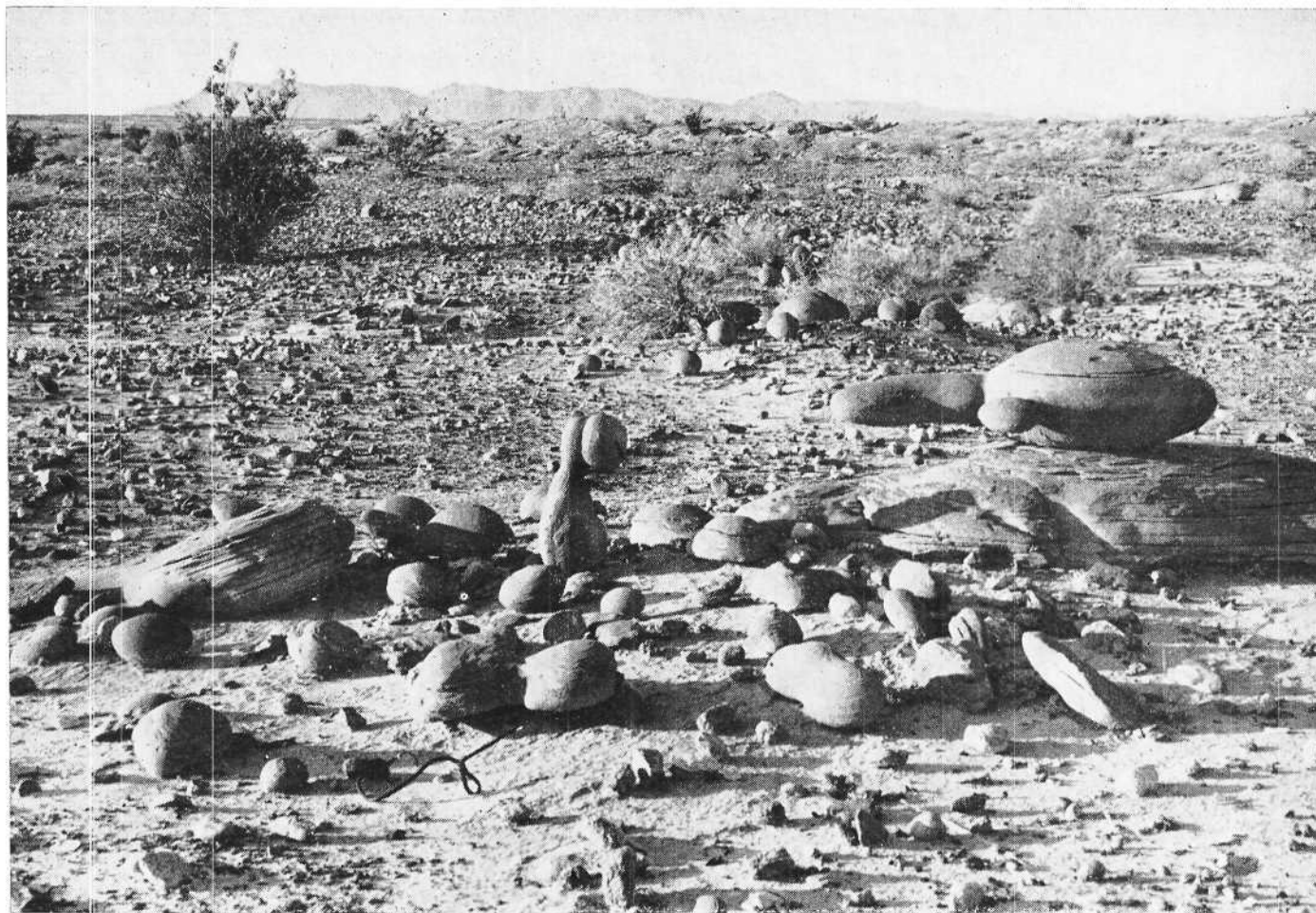
Like withering blasts from furnaces white-
hot,
The noon-day sun glares pitilessly down
Upon a land the hand of God forgot—
Scorched, lifeless, shriveled, arid, bare
and brown!

Only the awful stillness day by day
O'er wastes swept by the hot sun's burn-
ing breath!
A treacherous, deceptive Great White Way!
A land of desolation—and of death!

THE DESERT

By LILLIAN OMUNDSON
El Paso, Texas

The desert is a place of beauty!
Over it a grey-green mantle's spread
So restful to the eye.
Even winter leaves it there untouched.
When in your land the green leaves sere
and grasses die,
The desert lies unchanged.
When winter rains descend upon her dunes,
They leave behind a multitude of flowers.
The yucca holds her silver torch on high,
The cactus lifts its orange chalice to the sky.
Spiny swifts dart toward their prey,
And now and then a hare leaps into view.
It is a place of magic.
The desert dead, you say!
It is not true!



The concretions often are found in groups, and the groups often are quite similar to one another, while those a short distance off are entirely different "models."

Puzzle Rocks of the Badlands

No one knows what prompted Nature to create the fields of weirdly shaped sandstone concretions in the erosion-fretted Borrego Badlands—nor can anyone say for certain just how they were formed. Indians who lived along the shores of prehistoric Lake Cahuilla gathered the more regular of these rock oddities and used them to build foundations for their brush shelters. These house-rings still can be seen—evidences of an ancient community. This story will direct you on a field trip fascinating to archeologist, geologist and rockhunter alike.

By HAROLD O. WEIGHT

Photographs by the Author

Map by Norton Allen

WHEN THE Colorado River transferred its outlet from the Gulf of California to the Salton Sink and created prehistoric Lake Cahuilla, about a thousand years ago, primitive tribesmen in surrounding territory moved in and found choice homesites along the lakeshore. Undoubtedly they felt that the Happy Hunting Ground had materialized.

First there was an unlimited quantity of fresh water—a novelty for any desert dweller. Abundant vegetation sprouted along the beachline—willows, palms, mesquites, tules, and other plants which must have attracted birds,

mice, rats and other small table delicacies. Larger game which came to drink sometimes could be killed. And always there were the makings of a fish-fry right at the front door.

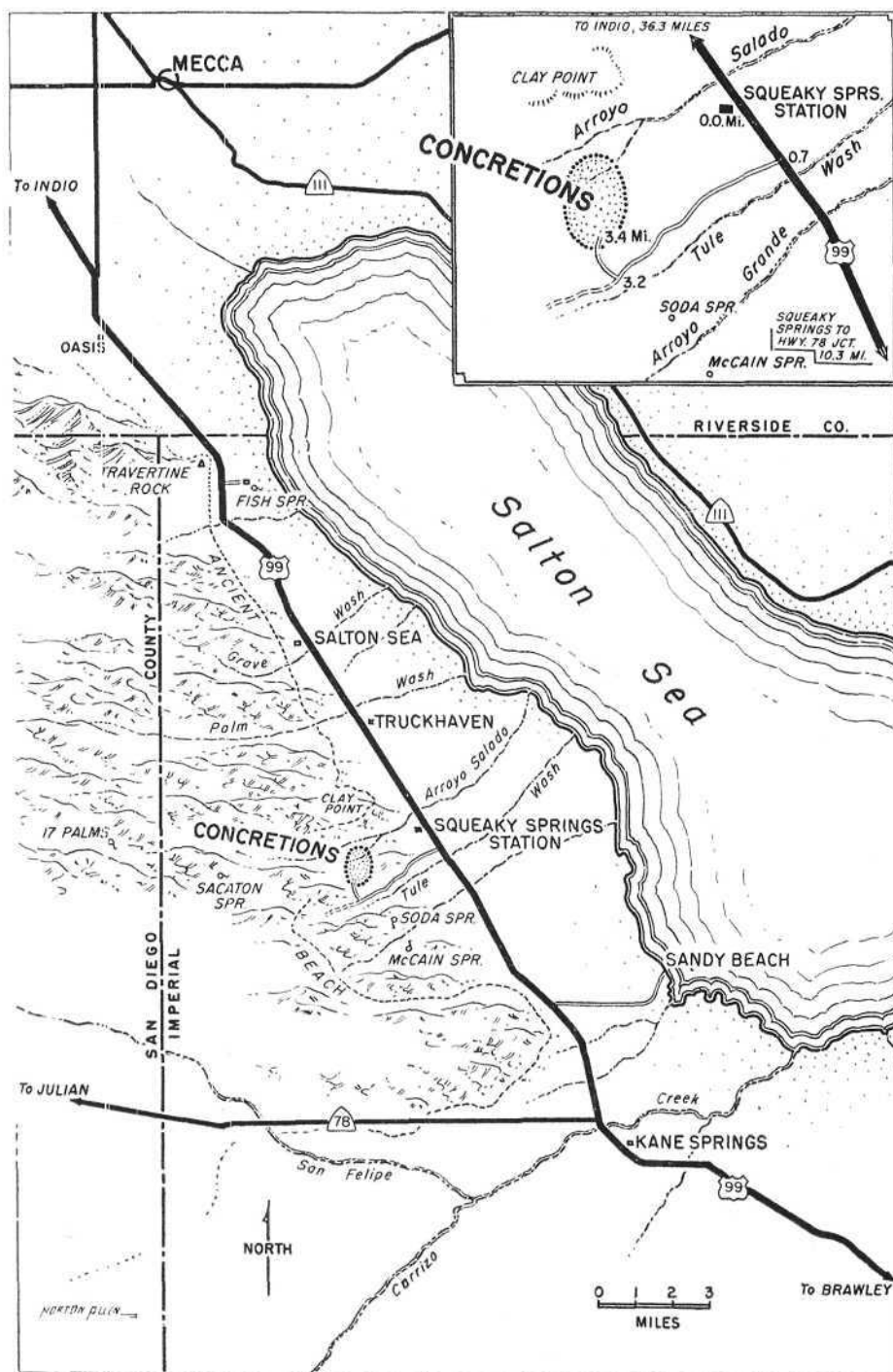
"The Indians found something else, too, which I am certain held great interest for them. Scattered over that great erosion-fretted bajada west of the lake, which we call the Borrego Badlands, were millions of sandstone concretions. These fantastically shaped geological curiosities were so numerous in fact, that the house-rings of some of the shoreline villages were made almost entirely of them.

Naturally, a primitive people would be interested in rocks that looked like distorted editions of animals, humans and inanimate objects as well as the materializations of the outlandish creations that might have haunted their dreams. In some parts of the Southwest, concretions were looked upon as sacred things or personal fetishes. Many have been dug from the ruins of old Casa Grande in Arizona, and they have been found among the hidden paraphernalia of dead Pima medicine-men.

If some of the Lake Cahuilla residents had only realized it, they had



Jerry Laudermilk wonders just how and why such fantastic shapes as these sandstone concretions came into existence.



the equivalent of a gold mine there in their back yards. A trader who took a carefully selected load of those weird sandstone figurines through Indianland probably could have made his million in beads, pots, baskets and other contemporary forms of wealth. Perhaps one of them did.

Whether they traded concretions or not, there is little doubt they did bring the unusual ones home, that the Ca-huilla children liked to play with them as modern youngsters do, and that the elders probably had more than one debate over just what they were—and why.

Today, anyone who sees one of the more fantastic concretionary forms is just as curious about its how and why as were the Indians. Some very plausible explanations as to their origin have been advanced.

John Hilton gave a good background to the whole matter in *Desert Magazine* (March, 1939). His own interesting theory was that the concretions were formed when lime in solution in the water was precipitated out on various bits of organic matter which formed the nucleus around which the sand and lime "grew." Different nuclei evolved into different final shapes.

Some persons still insist that concretions are fossil somethings. One suggested a certain type might be petrified gopher holes.

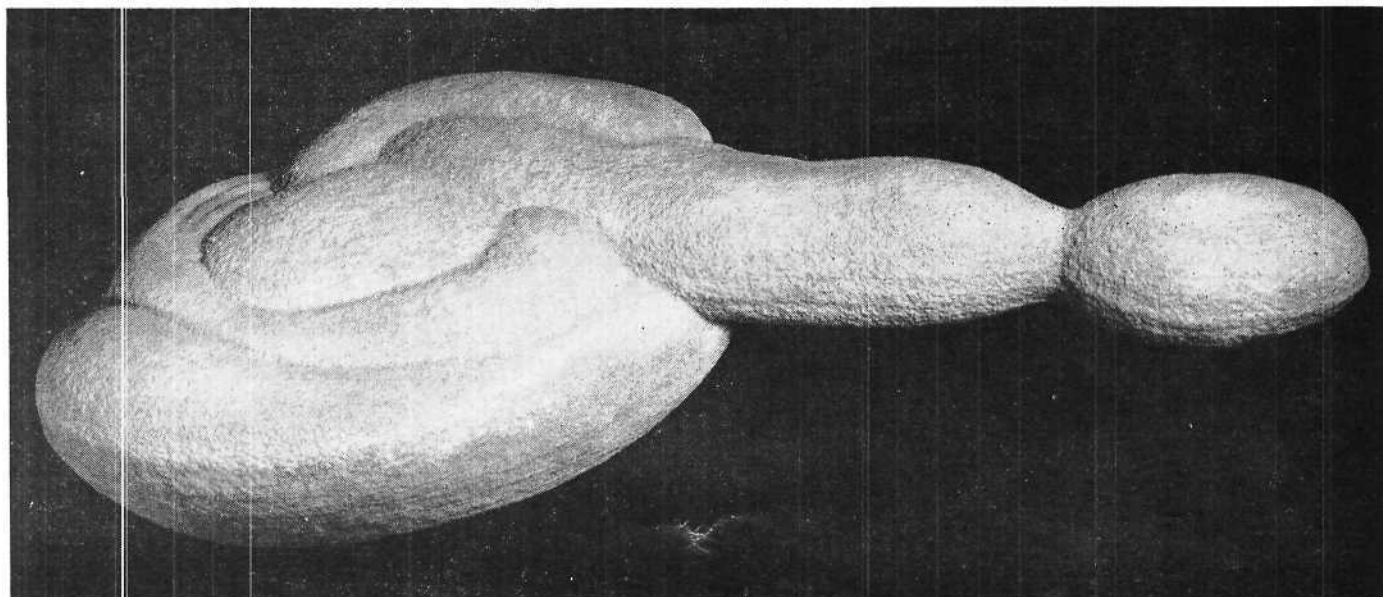
The trouble with most of the explanations I have heard is that each has to make an exception of a type that doesn't follow the rules—and that makes the whole theory questionable. There is no doubt that the concretions in the badlands do have some connection with the bodies of water that filled the Salton basin long before the Indians came. Possibly they go back to the time when the area was an extended arm of the Gulf of California.

Also, there is no doubt that they are formed of sandstone and some cementing agent—usually calcium carbonate—and that they often had some sort of nucleus. They must have been formed after the sand and clay were deposited, since the bedding layers continue through many of them, and they frequently weather to pieces along these layers.

These are facts. Going beyond them, I am inclined to fall back on the primitive explanation, even if it is presently out of favor. Some of the more fantastic shapes could only have resulted from a mud pie party held by the Spirits of Geology.

However they may have originated, concretions continue to fascinate most people. Many who have no interest in rockhounding delight in hauling a sandstone pup or whale or hat-rack home for the garden. On the other extreme, even uppercrust rockhounds who hunt only for cutting material sneak home a few specially fantastic concretions now and then. And though many tons have been hauled away, it still is not difficult to find concretions almost anywhere in the badlands west of the Salton Sea.

There are all sorts of concretions. Each area seems to have its own peculiarities and types — and quality. The Borrego Badlands are a favorite desert spot for Lucile and me, and we have driven up most of the great washes and hiked over much of the land between them. In that area we have one concretion hunting ground where we have found a number of prizes which compare favorably with the best in modern sculpture. That isn't just our notion. When an acquaintance, a sculptor who teaches art in one of the state colleges, saw some of these concretions, he at first refused to believe that Nature had been the artist. Then he became excited about them and brought some of his students over, pointing out to them things like beauty of line and dynamic



Petrified rattlesnake? No—this is one of the sandstone concretions from the Indian Wash area. Actual size, about 17 by 8 inches.

symmetry. Then he wanted to know how he and his pupils could locate the field.

We came upon this particular area while exploring the tributary washes of Arroyo Salada by jeep and on foot. The field lies largely to the south of a lower left branch of Arroyo Salada; a branch we call Indian Wash because of the village site with numerous house-rings which lies close beside it. Circling on foot through the area around the village site, we discovered a colony of sandstone turtles of bulky proportions. Then we found a group of concretions the size and general shape of bull fiddles. Farther to the south we collected from patches of small circular sandstone balls centered in discs—miniature Saturns. There were concretion medallions, grotesque semi-human figurines like African images and imaginative abstractions which would put any futurist artist to shame.

So puzzling were some of the concretions in this field, so different from any we had seen “explained,” that we decided to bring our friend, Jerry Laudermilk, down to see what he could tell us about them. Jerry, a research associate in geo-chemistry at Pomona College, seems to have the knack of getting answers to troublesome problems of this nature. So, on a brisk winter morning, we drove down from Claremont to the point where Highway 99 crosses Arroyo Salada.

Lucile and I often had discussed the possibility of mapping this particular concretion field for collectors, but at that time the only route we knew to it was the one up Arroyo Salada and then up Indian Wash. It is a wonderful trip up this arroyo (*Desert Magazine*,

April, 1945), and there are times in the year when it and the other great washes in the badlands can be navigated for considerable distance by the ordinary passenger car with little or no trouble. But there are other times when such an expedition can result in extreme discomfort and even tragedy.

In summer, the heat concentrated in these washes can kill, and even experienced sand skimmers can drop to the hubs in soft, dry sand. After rains, seeps arise in the arroyo bottoms, forming soft slippery clay traps in which cars can bog. Undermined clay walls collapse, hurling tons of debris into the “road.” Flood runoff lowers wash bottoms exposing rock barriers which can be hurtled only by agile jeeps.

So, each time we decided it would not be a safe trip for many drivers. The expedition with Jerry and Helen Laudermilk proved this point again. We were accompanied by two friends, Bill Reiter and Martha Berry, who tried the trail up the wash in a passenger car and became mired right at the entrance of Indian Wash, in a *cienega* which forms there after any rain. With the jeep truck, it was a simple matter to pull them back to dry land. Without it, a lot of hard work would have been necessary.

This past summer, however, we traced another route into the concretion area which should be safe for any collector during the cool dry seasons in the desert. The remains of a World War II army road cuts west from Highway 99 exactly one mile south of Arroyo Salada bridge (.7 of a mile south of Squeaky Springs station.) Though this road is being cut to pieces by runoff it can be followed with comparatively little trouble for the little

more than 2½ miles to where it branches. The right branch can be taken for only a short distance before it is badly washed. From this point the collector must hike toward the Santa Rosas, north of west, for a little less than a mile before the edge of the concretion area is reached.

On our trip last winter, Jerry picked up an astonishing aggregate of lumps and curves which looked like a cross between a monkey with a cap on and a large cat. He looked at it for a moment and then exploded: “Well I’ll be . . .” And that’s the most positive statement on the concretions that we’ve gotten from Jerry so far. He is working on the matter, however, as time permits. Last time we saw him he advanced the tentative theory that at least some of the forms might have resulted from colonies of algae, with the gelatinous mass acting as a nucleus for the sandstone forms.

Besides the problem of finding a safe road into the general area of the concretions, Lucile and I have hesitated about publicizing it for another reason. We would hate to see the old Cahuilla village site disturbed by vandals. However, the last time we were in we found increasing evidence of jeepsters in the area and one vehicle had driven right through and over one of the old rings. So it would seem, as we have found at other localities, that simply keeping silent about something does not protect it. And we still are of the belief that most of those who follow our *Desert Magazine* field trips will help to preserve the wonders of the desert, not destroy them.

We hope we are not wrong in this case. The Indian Wash village site is

a spot we would like to visit again. The first time we stumbled upon those house-rings in the lonely badlands we were bewildered. We did not connect them with the ancient times of Lake Cahuilla. The rude semicircles of stone did not look that old, and among them we saw charcoal and ash and half-charred bone which told of primitive feasting. But why should there—how could there—have been an Indian village here in this waterless, foodless, shadeless alkaline wasteland?

When we looked closer at the cooking-fire debris, we understood. Most of the bone remnants were parts of the skeletons of fish. That meant that this was one of the villages which once had stood upon the shores of vanished Lake Cahuilla; that when it had been occupied there had been water and food and probably shade for its inhabitants. It also meant that the winds and rains of centuries had swept this lost encampment without destroying the evidence of feasting, though the last of the feasters had departed at least half a millenium ago.

Standing in this ghost village, looking across the clay and sandstone desert to the salt sea below, it seemed quite unbelievable that this once had been an Indian paradise. Yet those who have studied the matter declare that it was. Lake Cahuilla—water in the desert—had made all the difference. How had the lake come into existence?

The old Red River of the West gave a very good example of the probable course of events back in 1905 when a flood stage took out the gates on the early Imperial Valley irrigation canal, and the Colorado River poured into the below-sea-level Salton Sink. It took engineers more than two years, and it cost millions of dollars to convince the big river it should return to the Gulf.

There were no engineers when the river changed its course a thousand years ago. The Colorado poured into the Salton Sink until it created a lake with a 250-mile shoreline. When it returned to its old channel, it did so of its own accord.

There is evidence that Lake Cahuilla existed for hundreds of years. When the Colorado sent in an extra head of water, the Indian villagers moved to higher ground. When it shifted to the Gulf, they followed the retreating shoreline.

Then the Colorado went back to its old channel—and stayed there. The lake dried up and vanished, and the Indians went back to work. Final disappearance of Lake Cahuilla has been placed at approximately 1500 A.D.

But, though the lake is gone and the Indians long vanished, the house-rings have survived—concretions piled carelessly about the bases of brush shelters. These primitive foundations and the odd rock-fields from which they were gathered are links with an incredible desert past.

And, until Jerry Laudermilk or some other modern scientist finds the answer, we will wonder—as did our Indian predecessors — about the origin of these strange puzzle rocks of the Borrego Badlands.

House-rings built of concretions, evidence of an Indian village from 500 to 1000 years old, which once stood on the shores of prehistoric Lake Cahuilla.



Letters

Desert Converted Them . . .

Williams, Oregon

Desert:

Now you've gone and done it! Here were we—my husband and I—living on a small mountain ranch supposedly content with our way of life. Then a very thoughtful friend gave us a subscription to *Desert* for Christmas last year.

Ever since we have been decidedly *uncontent*, and our feet itch to try a new life on the desert you write of. Both of us have spent a little time on the desert, but we didn't see it then as you have since shown it to us.

My husband is a prospector by choice and, given a chance, I'd be the most enthusiastic of rockhounds.

Thanks for the most interesting magazine I've ever read.

MRS. CLEVE WILSON

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Salt for Desert Dwellers . . .

Battle Creek, Michigan

Desert:

We have had much controversy as to the value of salt tablets on the desert. Are they worth the trouble? As a long-distance bicycle rider I spend much time on the desert and would appreciate your advice.

A. B. RUSSELL

Salt tablets are not beneficial to everyone, although I found them helpful when serving in the Sahara Desert region during the war. Persons who do not perspire freely likely will not get any benefit from them, and to others they cause stomach discomfort. Since the war, instead of taking salt tablets, I put extra salt in my lunch at the noon meal. I find this keeps my energy at higher gear during the afternoon.—R.H.

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Arrowheads His Hobby . . .

San Leandro, California

Desert:

How did the Indians make their arrowheads, and where did they get the rocks they used? Can modern man duplicate the heads? These questions arise in my mind each time I come across another of the ancient weapon tips.

I am a postal transportation clerk, running into Lovelock, Nevada. Some of my spare time in Lovelock is spent hunting arrowheads with a friend of mine there. My friend, George, has

learned to spot places in sand hills or on dry lake bottoms where the wind blows the sand and uncovers the artifacts.

We find many in perfect condition, made of different materials. The workmanship is excellent. How careful must have been the Indian craftsman, probably working with crude tools with the delicate material, so easily spoiled by a misplaced chip.

I would appreciate knowing more about arrowheads and the methods used by the Indians in producing them. Can *Desert Magazine* answer some of my questions?

Incidentally, Lovelock is in an area containing a variety of minerals and rocks which would delight any rockhound.

JAMES F. COOPER

M. R. Harrington, curator of archeology at Southwest Museum, Los Angeles, wrote a comprehensive article on arrowheads for Desert Magazine. Entitled "There's No Mystery About Arrowheads," it appeared in the December 1941 issue. In this article, Dr. Harrington lists the steps taken and the tools used by the Indian to produce arrowheads. There are two main processes: "percussion" or the use of a hammer, and "pressure" or the use of a flaking tool. After selecting a piece of flinty rock—obsidian, chert or the like—the craftsman employed percussion, hitting the original chunk with a stone to get a thin flake. Percussion again—this time hitting the head with a deer antler mallet—accomplished a rough shaping of the blade. Pressure followed, small chips being flaked away. A bone point shaped the stem of the arrowhead, the craftsman scraping it across the flint. Finishing touches were added by holding the head on a stone and chiseling with a deer-antler "pitching-tool" hammered with a stone.

—R. H.

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Rockhound Accommodations . . .

Los Angeles, California

Desert:

No doubt many *Desert Magazine* readers have visited Horse Canyon, 15 miles west of Mojave, California, in search of horse canyon agate. The Organic Living Foundation of California has purchased the 620-acre ranch at the head of the canyon and intends to build cabins there so rockhounds will have a place to stay when they take field trips in the area.

The road into the canyon has been repaired, and it is now quite easy to get in and out.

FRANK C. MURRAY

Joshua-Bound Yearbooks . . .

Auburn, California

Desert:

Evalyn Gist's "Forgotten Mill of the Joshuas" (January *Desert*) made me remember something which may interest your readers.

For one of the Los Angeles High School yearbooks—either 1897 or 1898, possibly '99—Joshua wood was used for the cover. I valued my old numbers very highly and often admired the strange porous wood cover and wondered about it. I suppose one of the Joshua wood concerns of which Mrs. Gist speaks sold the idea to the staff. It is the only time I ever saw it so used.

My old copies, and in fact all my books, were destroyed in the Berkeley fire of 1925.

MRS. GENEVIEVE K. SULLY

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Rockhounds Answered Call . . .

Tucson, Arizona

Desert:

We at the Veterans Administration Hospital in Tucson wish to thank *Desert Magazine* for publishing the letter written by Mrs. Ruth Hurd and telling of the need for cutting materials for the hospital's lapidary program.

We have received many donations and wish to express our appreciation to all who have contributed.

J. E. GAINES, M.D.

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Invitation to Rock Lovers . . .

Earp, California

Desert:

My wife and I are a pair of old folks in our 70's. We are readers of *Desert Magazine* and have been for the past four years. We go to Blythe each month, and *Desert* is the first thing we buy.

We have spent the last five winters at Earp, in the meantime gathering gem rocks in the Arizona and California desert. We have many kinds, some of which rockhounds say they have never seen before.

We would be very pleased for anyone interested in gem rocks to visit our place. We are 50 yards west of the post office in Earp, California.

MR. AND MRS. D. E. HUGHES

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Color and Inflation . . .

Anaheim, California

Desert:

Being a constant reader of your excellent magazine for a number of years, I want to tell you how much I enjoy it. But, regarding the new color covers, I wish to say that I don't think they add a cent of value to your publication.

Please take the August, September and October issues and lay them down by any one or all of your recent color



Privacy as You like it on the Santa Fe



— Room to
Roam, too!

It's a private world of your own—your room on one of Santa Fe's great trains, whether it's a deluxe suite or economical roomette.

When you feel like roaming, there's a lounge car for friendly relaxation... and at mealtime, you choose from a Fred Harvey menu and eat from a table, instead of a one-choice tray.

You board the Santa Fe downtown. You leave on schedule in any weather... arrive safely, relaxed, refreshed.

Yes, figure it out. You'll go Santa Fe—all the way!



C. C. Thompson
Pass. Traffic Mgr.
Los Angeles
California

covers. Then ask yourself whether you would give one cent more for a magazine with a full color cover than for one with the single tint block.

If this color business costs you the least bit more than the old method, please discontinue it; because if it is expensive you will have to raise the subscription price; and I couldn't afford that. It costs too much to keep eating nowadays.

I am an 80-year-old machinist with no job and consequently very little income, so you can understand why I am concerned about the inflated cost of living. Please don't do anything to increase the price of your already excellent *Desert Magazine*.

JOHN M. THOMAS

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Sandspikes Once Snails?...

Bloomington, Indiana

Desert:

In a letter in the December issue of *Desert*, C. S. Knowlton mentions finding spiral "sand spikes." His description sounds to me like the internal molds of fossil snail shells of the turritella type. Snail shells are often filled by sand which subsequently becomes cemented and forms sandstone. Later the calcium carbonate of the shells is dissolved away by groundwater, leaving the loosely coiled internal molds of sandstone.

Snail shells are described as sinistral or dextral, depending on whether their spiralling is right- or left-handed. Mr. Knowlton probably could have my suspicions confirmed or refuted by conferring with any paleontologist.

These conclusions are not offered as an explanation for the other forms of "sand spikes."

JACK PICKERING

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Flood in Death Valley...

Pacific Palisades, California

Desert:

Nell Murbarger's fascinating story of Tule Canyon (December *Desert*) reminds me of an interesting experience I had in the early 1900's when I was a mine manager in Goldfield, Nevada, and staked some prospectors.

One of them, Dan Younger, was a sturdy old chap. I outfitted him with four pack mules—not jacks—and he headed for the west side of Death Valley. Months later he returned with no equipment but telling weird tales of a bed of huge clam shells filled with pyrite on top of a mesa. He said his mules had been lost in a sea of mud at the extreme upper end of Death Valley where Lida canyon drops an occasional cloudburst into the valley. He opined that the bad storms he had experienced might be the result of all

the powder they were exploding in the "Roosin-Japong" war.

I didn't know Death Valley as well then as I do now and merely thought "Dad" a fancy liar. But I changed my mind some time later when I went to the lower end of the canyon and, from a considerable elevation, looked down on the awe-inspiring view of the valley.

I told the miner whose property we were examining Dad Younger's story, and he told me of a narrow escape he had from a cloud burst about the time Dad had lost the mules.

He was living in a stone cabin the old timers had built near the bottom of a gulch. He was awakened one night by a terrific storm and got up to look out just in time to see a vivid flash of lightning reveal a white wall of water tearing down toward his cabin. He ran up the hill just in time to escape the flood. He said he never would forget the roaring sound of rushing water and grinding rocks which gave off sparks as they pounded together, everything illuminated by the almost continuous flashes of lightning.

I saw the high water mark on what was left of the cabin, and then I believed Dad Younger's story.

Congratulations to *Desert Magazine* on the gorgeous color cover of the December issue. What a wonderful photographer that man Muench is, and how well your new presses have duplicated his picture!

HENRY CURTIS MORRIS

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Si, Si—SEE-bo-la...

Wichita, Kansas

Desert:

I read Harold Weight's article, "Opalite on the Road to Cibola," in the December issue. He states Coronado's cities of Cibola were pronounced "SEE-bo-la." Where?

We have lived all our lives at the virtual end of Coronado's trail, and we have always read and heard of his "seven cities of Si-BO-la." I have never heard it pronounced otherwise.

We thoroughly enjoy *Desert Magazine* and head for New Mexico and Arizona every chance we get.

WINIFRED JENSON

The name Cibola is properly spelled with the accent over the i. According to our Spanish expert, this means the correct pronunciation is SEE-bo-la. However, few words survive intact the journey from a foreign language into our own. Pronunciation, accent, spelling — one usually is changed. So, as Harold Weight points out, Cibola is known to Arizonans, and to most Americans, as Si-BO-la.—R. H.

Best Wildflower Display Since 1949 is Forecast

Under the sunny, clear blue skies of late February and early March, splashes of color will appear on the desert landscape as wildflowers begin to blossom. Each spring Nature's floral carpet is different in color and design, and each spring thousands of persons flock to the desert to see the display. What can they expect this season?

On the whole, observants promise the most colorful floral display since 1949. Snows and unusual amounts of rain in the desert areas, combined with prospects of an early spring, assure better than normal flowering in all areas except Death Valley.

Reports from Southwest sources describe local conditions as follows:

Saguaro National Monument — As early as late January, several species of perennials were blossoming in the Tucson and Yuma areas of Arizona. Hedgehog cactus and possibly the prickly pear are expected to flower in early March. Although too early to set a date, Samuel A. King, monument superintendent, forecasts a good display of verbenas and California poppies in the vicinity of Picacho Peak. Small buds are beginning to appear on the Pentstemons, and blossoms should appear by the first of March. "At this writing, all types of perennials and succulents have a more lush appearance than at any time during the past several years," reports King.

Mojave Desert—The Randsburg region, between Randsburg and Inyokern on Highway 395, probably will offer the greatest variety of blossoms in this area, according to Clark W. Mills of Trona, California. Desert candles, thistle and sand verbena will be found along the slopes of the Argus Range, both in Searles and Panamint Valleys, as well as on the foothills of the Panamints. Reports from Wildrose Canyon indicate the Panamint daisy already is sprouting with promise of a very beautiful display.

Death Valley National Monument—Superintendent T. R. Goodwin is pessimistic over 1952 wildflower prospects for Death Valley. "Prior to the big January storm, there was no germination. If the .6 inches of rain which has fallen proves sufficient to start growth, it will be well toward Easter before there will be any flowers. In the mountains the snow pack is heavy, but flowering at high elevations never occurs until late May or June

after the main Death Valley travel season is over, and comparatively few summer visitors will see this display."

Casa Grande National Monument—Unusually good flowering for annual plants, bushes and cacti is predicted by A. T. Bicknell, park superintendent.

Mesa, Arizona—"Conditions in the beautiful Superstition Mountains area are more favorable than at any time since 1941," writes Julian M. King of Apache Junction, Arizona. "In 1951 we enjoyed 15½ inches of rain, twice as much as in any of the past five years. In January of this year, .88 inches had fallen in three rains, and the weather was warm and sunny between times. Scarlet Buglers already are blooming in Hieroglyphics Canyon; these, desert marigolds and desert hyacinths should all be blossoming in February.

Joshua Tree National Monument—Lupine, chia, desert dandelion, chuparosa, encelia, phacelia and sand blazing star are among wildflowers expected to blossom in late February and early March at lower elevations, particularly around Cottonwood Spring and Pinto Basin. Frank R. Givens, park superintendent, suggests visitors bring small magnifying glasses through which to study the very small flowers of some plants.

Lake Mead Recreational Area — Barring unforeseen complications, a colorful display is expected beginning in late February and early March and continuing to late spring. Russell K. Grater, park naturalist, reports the ground is thoroughly soaked for a considerable depth. "Masses of small annuals began to appear late in January, and there already are good displays of wild heliotrope and lupine at lower elevations." Indications are that visitors can expect good displays also of yellow evening primrose, sand verbena and desert chicory; desert marigolds, desert dandelions, mallow and dwarf monkey-flower.

Mojave Desert—Young plants may be seen in almost all areas of the central and east Mojave Desert, according to Mary Beal, desert botanist. But, Miss Beal adds, "How fast they develop and come into bloom depends on the weather. Continued warmth will bring them on rapidly and give us flowers in March; during cold weather, the plants will hug the ground and do nothing in the way of growth."

THE STORY OF "CALICO PRINT"

Calico, in the vivid Mojave Desert hills, was a silver boom camp in 1882. It demanded a newspaper to tell the world—and itself—what a wonder it was. And what better name than the PRINT—the CALICO PRINT! . . . Type cases arrived piled. The press was a week late. But Editor Over-shiner drafted citizens as typesetters and pressmen and the first issue appeared July 12. The PRINT'S career was brief and tumultuous as it followed Calico's boom and bust. It suffered fire and flood, and when collapsing silver prices foretold the camp's end CALICO PRINT became a ghost.

Ghost bones rattled when CALICO PRINT was revived in 1950. Our first issue, November 1950, sought to tell the tales and picture the trails of the Desert West in a newsprint magazine which retained the atmosphere and flavor of boomday CALICO PRINT. Each issue centers around some place, person or event in Desert West history, with stories told in the words of men and women who were there (many never before printed), or by accounts in old newspapers, rare and out of print books, illustrated with oldtime and new photos and old maps. The Story of the Desert West is rounded out in each issue with tall tales, lost mine legends, frontier folklore, features on Indians, animals, plants, geology.

We think you'll really like our current—February 1952—issue, focused on GOLD, GUNS AND FIESTAS IN OLD PICACHO, with tape-recorded stories from those who knew the gold camp on the Colorado River in its glamorous days, 13 oldtime and eight present-day photos, data on the mines and a reproduction of the original Picacho townsite map of 1895. ALSO: Hilarious real estate troubles in boomcamp Rawhide, Nevada; Oldtimer Bill Keiser's story of lost gold near Quartzsite, Arizona; fantastic facts about Stick and Hoop lizards, wild burros vs. bighorn problems, unpublished California Gold Rush letter—and MORE!

You'll receive this issue and 11 more treasure-packed, pleasure-packed CALICO PRINTS for only \$1.50! If you wish, we'll start your subscription with January, featuring the amazing story of ancient Casa Grande. Next month (March) we're going to tell stories of frontier hero Pauline Weaver and the ghost town of Weaver-ville, Arizona. We hope you'll be with us as we explore the byways of Desert West history and legend.

HAROLD & LUCILE WRIGHT

P.S.: Only 54 complete sets of CALICO PRINT'S first ten issues (advertised in Desert Magazine, November 1951) remain for sale. THE PRICE IS NOW \$2.50 FOR EACH SET OF TEN. All issues—except April, 1951—are still available separately. Write for prices.

CALICO PRINT

Edited by Harold and Lucile Wright
TWENTYNINE PALMS, CALIFORNIA

Mines and Mining

Tonopah, Nevada . . .

George Lippincott, president of Lippincott Lead Company, has announced a new mine, mill and smelter operation in Nye County at Bonnie Clare, about 30 miles south of Goldfield. Construction of the proposed plant will call for an initial expenditure of \$250,000, Lippincott stated, and will include a modern selective flotation mill process and a smelter to reduce lead-silver flotation concentrates and lead ore into bullion form. Also planned is construction of modern housing facilities at Bonnie Clare.—*Mining Record*.

Las Vegas, Nevada . . .

The Colorado River Commission set March 1 as the date on which lessees at Basic Magnesium plant will take over the joint facilities and complete the sale of the gigantic industrial property, thus discharging Nevada's obligation of \$24,000,000 to the federal government. Under terms of sale, the commission will dispose of Basic Magnesium, Inc., for a price somewhat in excess of \$5,000,000. The actual figure is the difference between the \$24,000,000 purchase price and the amount already paid plus the value of all sales contracts now in effect. Directors of the Las Vegas water district and the Basic plant lessees agreed on a contract under which the district would be able to purchase a minimum of 3,650,000,000 gallons of water per year at cost for 30 years from the corporation, which is expected to take over the Lake Mead pipeline March 1.—*Pioche Record*.

Santa Fe, New Mexico . . .

Zinc and lead are causing new activity at Los Cerrillos, the "Little Hills," an old mining area 18 miles south and west of Santa Fe. Two mines are operating in the Cerrillos district, and expansions are planned for 1952. The Tom Payne Mine and the Pennsylvania Mine are producing and shipping ore with a content of approximately 16 percent lead and 25 percent zinc. In the spring both companies plan to step up production and to reopen other long-closed mines. Los Cerrillos is near the location of the fabulous Mina del Tiro, a silver and lead mine which was known to the Spanish prior to the Pueblo Revolt of 1680, and the Indian turquoise mine of Chalchihuitl, said to be the oldest mine in the United States and probably in North America.—*Mining Record*.

Monticello, Utah . . .

According to G. R. Kennedy of the Navajo Uranium Company, the \$95,000 uranium testing plant at Shiprock has been turned over to the Atomic Energy Commission and already placed in operation. The plant was built by Navajo Uranium and is being operated for the AEC by the American Refining and Smelting Company. The commission will also take over all ore-buying stations on the reservation. Operation of the plant will eliminate the long-distance haul from uranium and vanadium mines in that area to mills at Monticello and Durango.—*San Juan Record*.

Baker, California . . .

Molybdenum Corporation of America has started digging into its 23 square miles of "rare earth" deposits at Mountain Pass, 30 miles northwest of Baker. The deposit is the largest lode of the industrially important ores in the world. The "rare earths" include metals valued at more than 1000 times their weight in gold—up to \$5000 an ounce. Among them are metals used in high-temperature alloys for jet engines, in hardening steel and in metallurgy, optical glass, waterproofing and mildew-proofing fabrics, searchlights, heat lamps, tracer bullets and flash powder.—*Barstow Printer-Review*.

Kanab, Utah . . .

King Manganese Corporation has begun manganese mining operation in Kane County, Utah, at the old Blackbird Mine. The mine has had limited development in the past by underground-tunneling methods. King Manganese will employ open pit mining, and a simple beneficiation plant will be used to separate the manganese from the clays and shales in which it is deposited. Present plans call for beneficiation of approximately 200 tons of heads per day. This is calculated to produce approximately 20 tons of high grade ore having a manganese content of at least 40 percent. The corporation is considering future construction of a large plant in south-central Utah for the beneficiation of low grade manganese ores. It also is conducting an extensive investigation of the tungsten possibilities of Southern Utah, and it is anticipated that some geophysical surveys will be made this summer specifically in connection with oil and gas possibilities in the area.—*Kane County Standard*.

Reno, Nevada . . .

First Uranium Corporation, currently producing 200 daily tons of tin-copper ore from its mine in Pershing County, is processing that ore in the company's recently completed \$400,000 mill, which is believed to be unique in the mineral field. The milling process was evolved by American Cyanamid Company over a two-year period. It consists of gravity separation of the tin, followed by flotation recovery of copper, gold and silver minerals. Underground development at the mine consists of nearly 3000 feet of drifts and crosscuts and 450 feet of shrinkage raises.—*Mining Record*.

Henderson, Nevada . . .

Arthur J. Kerbeczek, Jr., a young chemical engineer at Columbia University, apparently has found a solution to obtaining the corrosion-resistant metal titanium. Kerbeczek announced in November that he had discovered a new way to obtain the metal which may be useful for production of titanium in large quantities. All the details of his method have not yet been revealed, but it involves running an electric current through a compound of the metal in an electric cell. This method is similar to the present method of refining magnesium. A good deal further testing will be done before it will be placed in commercial use. Federal government authorities have stated that there is need for at least ten times as much titanium as this country now produces. Most immediate need for the lightweight, heat- and corrosion-resistant metal is in the construction of high speed jet and rocket aircraft.—*Pioche Record*.

Boulder City, Nevada . . .

First section of the United States Bureau of Mines Artillery Peak manganese pilot plant at Boulder City has started operations. The plant has a capacity of 50 tons of ore per day and, when completed, will represent an investment of \$600,000 in new equipment and in renovating and remodeling the original manganese plant constructed in 1941. It is designed for research, development and demonstration of processes for the treatment of ore from the Artillery Peak deposits, one of the largest manganese deposits in the United States. As the ore is complex and low grade, it cannot be used without extensive processing. The pilot plant tests will provide technical and economic comparisons of the various possible methods for making ferromanganese from Artillery Peak ore. Ferromanganese, indispensable for the production of steel, is an alloy prepared by smelting high grade manganese.—*Las Vegas Review-Journal*.

Here and There - on the Desert

ARIZONA

Victory for Conservation . . .

GRAND CANYON—Kaibab National Forest officials were worried over increasing numbers of people who staked out mining claims along the entrance highway to Grand Canyon National Park. They couldn't prevent such filing of claims, although the "mineral" was often only building stone or volcanic cinder and the real goal a service station or hot-dog stand. But now a new law, introduced in Congress by Congressman Patton of Arizona, assures that only legitimate claims based on real mineral showings can be filed, thus protecting the highway from undesirable developments. The law, although recognizing proper actual mineral deposits, restricts development to mining operations and vests control of the surface developments in the Secretaries of Agriculture and Interior.—*Sierra Club Bulletin*.

Mission Outpost to Reopen . . .

GANADO—Tselani Presbyterian mission outpost at Ganado, known as the Fannie G. Childs community health center, opened January 1 after being closed since 1945. During the last six years, only a weekly clinic has been held at the post by medical and evangelic personnel of Ganado Mission. Now the outpost will be operated as a health center for the Navajo people on a full-time basis.—*Gallup Independent*.

Judge Again After 46 Years . . .

SALOME—Judge Ernest Hall, well-known Arizona figure and brother of the late desert humorist, Dick Wick Hall, recently was appointed Justice of the Peace of Salome Township, which is centered by the community of Salome. Judge Hall first occupied this position 46 years ago, when the job was created in 1906. He is one of the pioneer newspaper publishers of Arizona, he and Dick Wick having started a newspaper in Wickenburg after landing in Arizona in 1899. In 1921 Ernie was the first Republican Secretary of State in Arizona. He was Territorial Librarian even before Arizona was a state, and was the first official to move into the new capitol in Phoenix in 1900. Later he was known to thousands of motorists for his years of service at the Ehrenburg Quarantine station at the eastern end of the bridge over the Colorado River on the Arizona-California boundary.—*Los Angeles Times*.

Gila Reaches Flood Stage . . .

HOLBROOK—Mixed rain and snow storms in mid-January poured thousands of acre feet of water into reservoirs in the Salt River and Gila Valleys and caused some damage to highways and other installations. While the amount of rainfall and snow varied greatly in northeastern Arizona, all sections were well soaked and heavy run-off was reported from the higher altitudes south of the Little Colorado River. Flood waters nine feet deep were reported in the Gila River, and several families in the Duncan area were forced to leave their homes.—*Holbrook Tribune-News*.

Plaque Honors Norman Nevills . . .

CLIFF DWELLERS LODGE—On September 19, 1949, Norman Nevills and his wife, Doris, were killed in the crash of their airplane at Mexican Hat, Utah. For many years Nevills had been recognized as the peer of all Colorado River boatmen. Late in December John P. Rigg of Grand Junction, Colorado, and Art Greene of Cliff Dwellers Lodge mounted a Nevills memorial plaque on the canyon wall of the Colorado underneath and a little to the north of Navajo bridge. The plaque was financed by former boatman associates and companions of Nevills on his river trips, and was designed by Mary Abbott. A dedication ceremony is to be held at the site next July 11 when those who navigated the Grand Canyon and San Juan rivers with Nevills will gather from all over the nation for a reunion at Cliff Dwellers Lodge.

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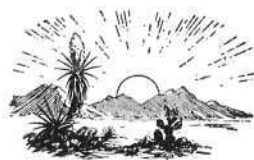
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Would Trim Down Mountains...

FLAGSTAFF—A coast scientist visiting in Arizona has figured out how to bring untold rainfall to the state. Bevan Thomas of Bell, California, believes "cloud channels" can be created by slicing the tops off mountain ranges. In his studies of coastal mountains and passes, Thomas discovered that rainfall was determined a great deal by elevation. He cited the fact that Imperial Valley in California is cut off and clouds pass overhead to dump water on areas eastward where the clouds managed to get through San Geronio Pass. Thomas' theory is that if these mountain passes can be created through the removal of the tops of mountain ranges the rain clouds could get through and water the arid lands of Arizona. "There is an unlimited supply of water from the Pacific," said Thomas, "and the more we open up those passes the more rain we will get in Arizona. It is cheaper than any other form of water."—*Coconino Sun*.

• • •

River Bed Rising Near Yuma...

YUMA—The Colorado River bed has risen nearly two feet between Laguna Dam and Yuma since 1947. Average elevation of the river bed in the eight-mile stretch between Yuma and Morelos Dam also has shown a rise of about one foot in the past five years. Another two-foot rise has been charted for a distance of 20 miles below the new Mexican dam. It is feared that the anticipated rising of the river bed and the accompanying rise in the river stage will seriously affect seepage of irrigated lands bordering the river in both this country and Mexico.—*Yuma Daily Sun*.

• • •

TEMPE—Since starting a campaign for gathering scorpions for use in manufacturing serum, Dr. Herbert L. Stahnke of Arizona State College has received 13,000 of the poisonous insects. Dr. Stahnke and his assistants have accumulated venom from 10,000 scorpions. The insects can be "milked" of the venom more than once.—*Tucson Daily Citizen*.

• • •

CALIFORNIA

Judge Ends Desert Career...

DAGGETT—Judge Dix Van Dyke, 70-year-old dean of San Bernardino County justices of the peace, is out of a job. Belleville township, the 92-year-old political subdivision over which the judge presided, was abolished the first of this year under the reorganization of desert area townships, and Judge Lucian Bell, justice of the peace for Yermo township, has taken over Judge

Van Dyke's duties. The retiring judge's father, T. S. Van Dyke, was appointed to the Daggett judgeship in 1903, and when he retired in 1923, his son was named to the office. Since 1916 the Belleville Township Justice Court has been conducted at the Van Dyke ranch home place. There Dix Van Dyke has moved his historic jail and collected hundreds of items of historic interest. Most of his lifetime he has been a student of desert history.—*Los Angeles Times*.

Consider Park Additions...

INDIO—Box Canyon may be included as a branch of the Salton Sea Park, establishment of which is virtually assured. Representatives of the State Division of Beaches and Parks inspected the canyon on a recent tour and were enthusiastic about it as an auxiliary to the Salton Sea Park. Maintenance of the canyon site could be done by the same crew operating at the sea. Nearby Painted Canyon, which usually is considered even more spectacular because of its coloring and steeper walls, would doubtless be included should the Box Canyon addition be approved.—*Date Palm*.

Traffic Summary Given...

NEEDLES—Summary of traffic entries into California through state border quarantine stations shows a total of 196,891 automobiles, 22,633 trucks and 4,084 buses entered the state in the month of December, 1951. Figures, released by the State Department of Agriculture, indicate Blythe was the largest portal of entry, with 40,313 vehicles and 114,359 passengers registering. Total number of passengers for the month was 613,531.—*Bureau of Plant Quarantine Bulletin*.

Speed Rock Weir Repairs...

BLYTHER—Heavy rock-moving equipment was moved to the Colorado River at Blythe late in January to speed repair of a 150-foot section of the 600-foot gravity weir which washed out during heavy storms, periling the diversion of water into the Palo Verde Valley. It was hoped the repair project could be completed by the end of February. C. P. Vetter, Reclamation Bureau officer in charge of river control, said the government has \$25,000 in a standing fund which will be used to start repair operations. He estimated the cost will be between \$40,000 and \$50,000. The Palo Verde Irrigation District agreed to finance all repairs in excess of the \$25,000. Despite the irrigation emergency, all water orders have been filled.—*Los Angeles Times*.



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350,549 See Dam Exhibit . . .

BOULDER CITY—More persons visited the Bureau of Reclamation's exhibit building at Hoover Dam this year than in any year since the building was opened to the public in late 1946. The exhibits were viewed by a total of 350,549 persons. Visitors to the dam itself numbered 403,908, this total being surpassed only by those of 424,175 and 407,980, set in 1947 and 1948 respectively when the guide service was operating on a 14-hour day.—*Las Vegas Review-Journal*.

Oldest Nevadan Dies . . .

ELKO—So old he could remember "when Salt Lake City was only a log cabin." Billie Mose, a Ute Indian believed to be at least 112, died in Elko December 25. Indian authorities believed he was Nevada's oldest resident. They said he could remember Salt Lake City when its population was 10 persons, all living in a single cabin. Born before Nevada became a state, he was present at Promontory Point when the golden spike was driven, connecting the eastern part of the United States with the west. He also was on hand when the Ruby Valley Indians signed a peace treaty with the federal government.—*Salt Lake Tribune*.

NEW MEXICO

Navajo Buy Trading Post . . .

GALLUP—The Navajo tribe has purchased the stock at the Pine Springs Trading Post and has begun operation of the post as a tribal activity. Sammy Day will manage the store. The tribe has owned the improvements at Pine Springs for a number of years and has leased them to private traders. Now they control the entire operation.—*Gallup Independent*.

• • •

Kit Carson Park Okayed . . .

TAOS—Kit Carson Memorial Park became a reality early this year with the exchange of final legal papers and signatures between officials of the state of New Mexico and of the Taos Foundation. Nineteen acres of land owned by the foundation have been transferred to the state for the sum of \$40,000. Establishment of the park culminates a three-year fight to gain recognition for the famous scout. Public interest first was aroused when a Colorado magazine suggested that, since Kit Carson was "unappreciated" in Taos, his remains be removed to Colorado, where a suitable monument would be arranged.—*El Crepusculo*.

Find Ancient Medicine Kit . . .

SANTA FE—A prehistoric medicine bag, made of muskrat skin and filled with herbs, eagle and lion claws, curiously shaped minerals and mineral ore, was found during the Chicago Natural History Museum's most recent expedition to New Mexico. It and other archeological findings, among the oldest ever recovered on this continent, were found in "Cordova" cave in New Mexico near the Arizona border. After examining the medicine bag, Dr. Paul S. Martin of the museum concluded the prehistoric "doctor" treated his patients by applying the appropriate medicine to the sick one. Then, pulling the treatment away from the affected area, the medicine man would tell his patient that the illness was now in the medicine. Dr. Martin estimates the medicine kit is about 4500 years old. It is remarkably preserved.—*Los Angeles Times*.

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Navajo Seek Water Rights . . .

GALLUP—"Prior and preferential" rights to 610,000 acre-feet annually of San Juan River waters were claimed by the Navajo tribe in a resolution unanimously approved by the Navajo council at a meeting at Window Rock,

THE STREAMLINED TRAIN WITH THE SOUTHERN ACCENT

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Arizona. The Navajo want the 610,-
000 acre-feet at the point of storage
and diversion. It would be used for
irrigation of 122,000 acres of reser-
vation land which would provide a
living for approximately 20,000 Na-
vajo, or almost one-third of the tribe.
It is estimated that 305,000 acre-feet
of water will be required by the project
itself, which lies 94 miles northeast of
the water source. Seepage, evaporation
and other loss factors were said by
councilmen to account for the differ-
ence.—*Gallup Independent*.

Urge End of Discrimination . . .

SANTA FE—New Mexico and 16
other states will ask Congress next
year to lift burdens of legal discrimi-
nation from America's Indian popula-
tion. At a meeting of the Governors'
Interstate Indian Council, the 17 mem-
ber states voted to urge adoption of
three new Indian policies by the fed-
eral government. They are: (1) trans-
fer of the Indian health and medical
program from the U.S. Indian Service
to the U.S. Public Health Service and
to private hospitals and doctors; (2)
transfer of all Indian education from
the Indian Service to public schools in
the various states, and (3) abolishment
of statutory provisions which are dis-
criminatory against Indians. The law
against sale of liquor to Indians is in-
cluded in this last category. Members
of the council feel that "it puts the
United States in a foolish position to
be broadcasting 'freedom' throughout

the world while discriminations of the
type we denounce are set forth in our
own laws."—*Alamogordo News*.

Indian Paid \$400 an Hour . . .

GRANTS — Paddy Martinez, an
elderly Navajo sheepherder, is Santa
Fe Railroad's highest paid employee.
After Martinez found a rich uranium
lode on Haystack Mountain in the
Zuni range of Western New Mexico,
the railroad put him on its payroll as
a "uranium scout" at a salary of \$200
a month plus a credit account at Grants
General Store. But Martinez doesn't
scout for uranium. He still herds sheep
in the Zuni Mountains and picks up
his Santa Fe paycheck every two weeks,
a task which takes an estimated 30
minutes each month. "That pays him
a rate of \$400 an hour and makes him
the railroad's highest paid employee,"
a spokesman said. — *Los Angeles
Times*.

Albuquerque Leads in Growth . . .

ALBUQUERQUE—In an advance
study of 1950 population, the United
States Census Bureau listed Albuquer-
que, New Mexico, as the fastest grow-
ing metropolitan area in the nation.
The bureau defines a metropolitan area
as a county or group of contiguous
counties which contain at least one
city of 50,000 inhabitants. Albuquer-
que gained 109.9 percent between
1940 and 1950, the number of resi-
dents jumping from 69,381 to 145,673
in that period of time.—*Gallup Inde-
pendent*.

More Water Predicted from Colorado and Tributaries

Greater than normal flood run-off
from most of the tributaries of the
Colorado is expected late in the spring
as a result of snow-pack reports com-
piled by the Weather Bureau for the
first of January. Reports from the
various upper Colorado drainage sheds
are given as follows:

Colorado River above Cisco: The
water supply outlook for the Taylor
as well as the Colorado River and its
tributaries above Glenwood Springs is
excellent, with 120 to 140 percent of
the 10-year average run-off expected,
assuming precipitation for the re-
mainder of the year is normal. Less
favorable is the outlook for the Dolores
and Uncompahgre basins where less
than average run-off is expected.

Green River basin: Current out-
look for Utah tributaries is excellent.
Streamflow of from 130 to 180 per-
cent of the 10-year average may be
expected for the upper Uintah and

Price River. On the upper Green in
Wyoming a flow of 80 to 85 percent
is indicated if the remainder of the
season is normal. Elsewhere in the
basin the run-off expectation exceeds
normal.

San Juan River basin: Streamflow in
the San Juan is expected to be slightly
below the 10-year average if the re-
mainder of the season is normal.

Little Colorado basin: Outlook is
much brighter than for the two pre-
vious drouth years. Main stream flow
at Winslow is forecast to be much
above normal.

Gila River basin: Run-off for Tonto
Creek and the Salt and Verde Rivers
is expected to be slightly above the
10-year average if precipitation for the
remainder of the season is normal.
For the Gila about 75 percent of nor-
mal, which is a decided improvement
over the last two years.

Navajo Consider Land Purchase . . .

WINDOW ROCK—Purchase of 56,000 acres of land near Zuni is being considered by the Navajo tribal council. The land, now owned by the Picuris and Pojoaque pueblos, would be bought for grazing use by Navajo living near Ramah. The land is now being leased.—*Gallup Independent*.

UTAH

Weather Halts Weed War . . .

SALT LAKE CITY—Heavy snows and freezing temperatures in Utah regions where an extensive halogeton program had been in progress for several weeks forced shutdown of the work. Approximately 1500 acres of an ultimate 25,000 acres have been reseeded, and about 14 miles of a programmed 60 miles of fencing have been completed, reported the Salt Lake City regional office, U. S. Bureau of

Land Management. Fencing protects newly seeded acres from grazing livestock. The crested wheat thus sown and protected for a reasonable period will choke out the livestock killer weed which has alarmed western stockmen by its rapid spread from a meager beginning in Nevada. Experience gleaned from the current program has indicated late summer and early fall months are the best time to plant the crested wheat.—*Salt Lake Tribune*.

Marker Will Identify Bridge . . .

SALT LAKE CITY—The familiar Mormon Pioneer Trails Marker—including the buffalo skull—will identify approaches to the Mormon Pioneer Memorial Bridge under construction at the old Winter Quarters settlement. The bridge, which may be opened in September if construction continues at the present pace, crosses the Missouri

River at approximately where the Mormon Ferry was operated in 1846-47 and later.—*Salt Lake Tribune*.

30-Year Dream Realized . . .

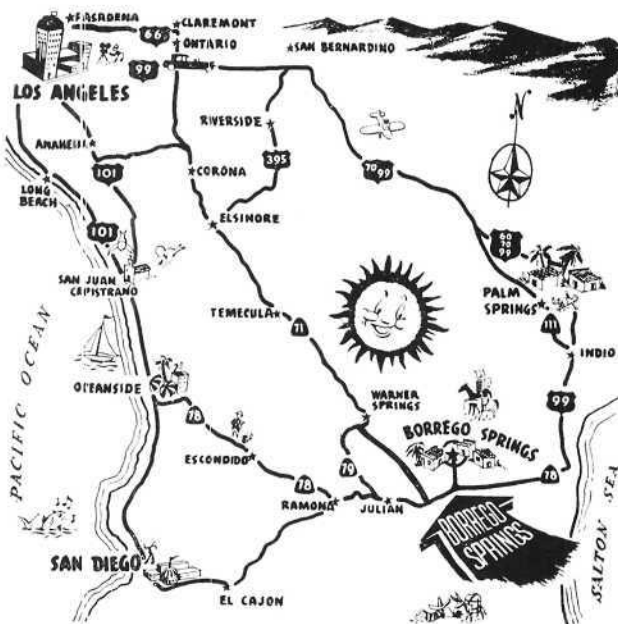
BLANDING—"Uncle" Walter Lyman's dream came true when Blanding Tunnel through Blue Mountain was completed in late December. Lyman was in charge when work on the tunnel was begun in August, 1921. He still had faith in the project after it was discontinued later that year because of the lack of equipment and a shortage of funds. In 1939 a group of Blanding citizens decided to try again. But soon work began to lag, contract after unfulfilled contract was let, and it looked as though the tunnel might never be completed. Then the Blanding Irrigation Company secured a \$75,000 loan from the Utah Power and Water



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Board. Under the new contract taken by Lyman and Vet Bradford, construction was resumed in 1947, although with rising prices it began to be apparent that the loan would not be sufficient to complete the job. Two extensions of time had to be secured from the Power and Water Board. But finally, on December 27, the tunnel holed through. It measures 5370 feet. —*San Juan Record.*

EXPLORATION! SAFE ADVENTURE! SCENIC BEAUTY!



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Seven-day voyage through the scenic canyon wonderland of Utah and Arizona.

Boats leaving Mexican Hat, Utah, May 1, May 11, May 26, June 4, June 16, June 26. Trips end at Lee's Ferry. One post-season run between Hite, Utah and Lee's Ferry, Arizona.

Fare: \$200 for one person, \$175 each for two. Larger group prices, also rates for other trips given on request.

"... A flight on the magic carpet of adventure into a canyon wilderness of indescribable beauty and grandeur." wrote Randall Henderson in the *Desert Magazine*.

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Discover "Missing Link" . . .

VERNAL — Discovery of the remains of an Indian culture that existed from 20,000 B.C. to 500 A.D. in Dinosaur National Monument in the northeastern corner of Utah has filled in the gap between Folsom Man and the Pueblo Indians. Colorado University anthropologists have announced. It formerly was believed that no humans lived in the area from the time of Folsom Man, who roamed the plains in 20,000 B.C., until the Pueblo Indians, dated about the time of the birth of Christ. But excavations in Hells Midden, a rubbish heap near the Yampa River in the monument area, yielded evidence of a primitive tribe which turned to farming and pottery making from its early hunting and fishing existence. "In the lower levels we found only stone and bone tools," said Robert H. Lister, assistant professor of anthropology. "There were knives, stone scrapers, bone tools for sewing hides and stone grinding tools. Then in the top levels—about 500 A.D.—we found corn cobs, kernels of corn and pottery. This shows they definitely were part of the great society of the southwest." —*Vernal Express.*

Bury Uintah Indian Chief . . .

SALT LAKE CITY—One of the last of the great chiefs of the Ute tribe, Chief Andrew Frank, leader of the Uintah Band on Uintah and Ouray Reservation, died Dec. 11 at the age of 73.

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LOS ALAMOS, NEW MEX.

Hard Rock Shorty of Death Valley



"Nope! They ain't no rattlesnakes in Death Valley!"

Hard Rock Shorty was talking to a bus-load of school teachers who had stopped at Inferno store during their Easter-vacation tour of the Valley.

"Nuthin' here fer snakes to live on," Shorty went on. "A grown rattler needs three gophers, eleven lizards an' a couple of young rabbits a week fer food—and there ain't that many animals within 20 miles of Inferno.

"If yu want to find snakes yu oughta go up in Buzzard Canyon. Place is full o' big diamondbacks. That's the place where Pisgah Bill has his tin mine. Bill always wears heavy boots when he goes in there to do his assessment work on account o' them rattlers.

"Fine spring up there, only they's millions of skeeters there, too.

"One year Bill took his dog, Skimp, in with him when he went to do his assessment work. Skimp was a pointer, an' Bill'd taught him to point whenever he saw a rattlesnake.

"Only trouble was the dog couldn't see in the dark, an' one night a rattler struck 'im on the nose. Bill heard the dog a whinin' an' rushed out tu see what the trouble wuz. The snake wuz just disappearing down a hole.

"Bill had one o' them snake-bite kits in his outfit, but he couldn't figger out any way to use it on the dog's nose. Then he got another idea. He wrapped Skimp up in a blanket with only his nose a showin' and tied him over by the spring where them skeeters wuz thicker'n raindrops in a cloudburst.

"Them skeeters went to work on Skimp. An' they did the job all right. Next morning the ground wuz covered with dead skeeters, an' Skimp wuz a feelin' purt as ever."

Gems and Minerals

CRYSTAL CHEMISTRY FAIRLY NEW SCIENCE

A crystalline substance is one having an orderly internal unit of structure. These units of structure may be ions, atoms or molecules. They have a definite size, shape and charge.

The discovery of X-rays in 1895 and the discovery of X-ray defraction in 1912 first made possible the study of the internal structure of these substances and gave birth to a new science, crystal chemistry. Arthur Still of Southwestern Geological Service discussed aims and methods of crystal chemistry at a meeting of the Yavapai Gem and Mineral Society. Still is chairman of the Yavapai Council of the Arizona Small Mine Operators Association.

GEM, MINERAL QUIZ HELD ROUND TABLE STYLE

Members participated in a quiz and round-table discussion at a recent meeting of Dona Ana County Rockhound Club, Las Cruces, New Mexico. Individuals jotted down questions and answers pertaining to rocks and lapidary work and submitted them to the group for discussion.

Presiding at 1952 meetings of the club will be S. F. Sanders, elected at the January meeting. Assisting President Sanders will be the new board: S. T. Smith, vice-president; Mrs. G. T. McQuillen, treasurer; Mrs. S. T. Smith, recording secretary; Mrs. A. G. Bardwell, corresponding secretary; J. T. Kilgore, historian, and Mildred Sanders, bulletin editor.

SPEAKER DESCRIBES ANCIENT COAL FOREST

Mrs. Theron Wasson, who was the first woman naturalist ranger in Yellowstone Park, led "A Conducted Tour Back to the Coal Forest" when she appeared as guest speaker of the Chicago Rocks and Minerals Society. Members were asked to bring specimens of coal plants (fern fossils) to display at the meeting. Mrs. Wasson took her audience through the Cenozoic, Mesozoic and Paleozoic cycles.

BRUCE BAKER ELECTED BY MOJAVE DESERT CLUB

At the January meeting of the Mojave Desert Gem and Mineral Society, Bruce Baker was elected president. He succeeds Jack Klein. Other officers on the new board are Les Denny, first vice-president and field trip chairman; Mrs. L. M. Glendening, second vice-president and publicity chairman; Jack Klein, secretary and treasurer. New directors are Clyde Compton, Les Glendening, Walter Dewey, Ethel Wills and Glenn Armstrong.

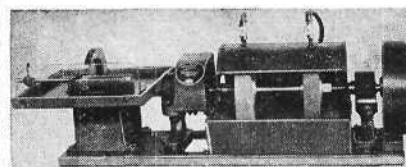
ORIGIN AND STRUCTURE OF VOLCANOES DISCUSSED

Jerry Laudermilk of Pomona College chose "Rocks from Hades" as the title of his talk on volcanoes, delivered to members of the Pomona Valley Mineral Club, Pomona, California. Graphically annotating his theory with chalk sketches, Laudermilk discussed the earth's interior and the origin and structure of volcanoes.

VICTOR VALLEY CLUB ELECTS 1952 OFFICERS

Sherman Marquand was chosen president at an election meeting of Victor Valley Gem and Mineral Club. He succeeds Walter Pilkington. A. D. McCain is new vice-president, Virginia Love will serve as secretary, and Alma Marquand is treasurer. Outgoing board members were honored at a Christmas dinner and party. The replica of a mining town in winter centered table decorations, which were arranged by Helen Pratt.

Robert White will lead activities of the Northern California Mineral Society in 1952. Other newly elected officers who will assist President White are Alden Clark, vice-president; David Friedman, treasurer; Bertha Sanders, secretary; Wilhelm Haedler, curator; Mrs. C. N. Edmonston, librarian, and Mrs. Harold Jewell, hostess. Directors are Dr. George Bates, Miss Louise Barton, Charles N. Edmonston and Ivor Welch.

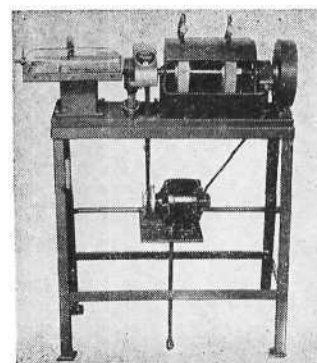


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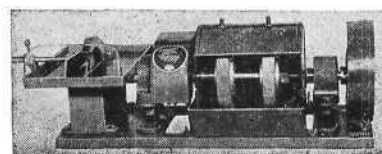
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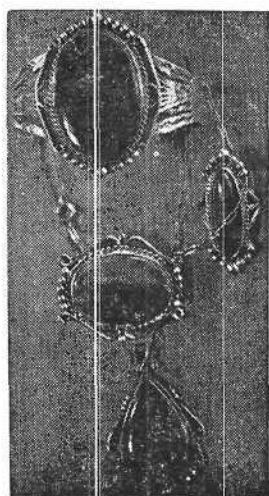
Complete (without motor) \$85.00
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WANTED: old mining and oil stock certificates. Books, letters, papers, pictures of the West and Southwest. Exploration, mining, surveying, etc. Will trade Franklin, N. J. fluorescent minerals, or pay cash. Send description and price. Fred W. Morris, 200 Red Maple Drive, Levittown, New York.

20 ASSORTED COLORFUL 2x3 cabinet specimens. Good for a beginner or to add to your present collection. This beautiful selection only \$8.00 postpaid. L. M. Jones, General Delivery, Bell Gardens, California.

BEAUTIFUL PETRIFIED palm root boulder from Tehachapi Canyon, California, 198 lb. \$65.00. Come and get it. R. Knaus, 10550 Shoshone Ave., Granada Hills, San Fernando Valley, California.

IF YOU ARE A ROCKHOUND you need the Lapidary Journal. Tells how to cut and polish rocks, gives news of all mineral-gem groups. Tells how to make jewelry, carries ads of dealers in supplies, equipment, gems, minerals from all over the world. Well illustrated, beautifully printed. Subscription \$2.00 a year—back numbers 50c. Sample Copy 25c if you have never subscribed or been sampled. LELANDE QUICK, Editor, Palm Desert, California.

CABOCHONS: genuine imported Agates, Carnelians, Rose Quartz, Lapis Lazuli, Tiger Eye, etc., beautifully cut and polished. Oval stones in sizes from 10 mm. to 16 mm. 25c each. Minimum order \$1.00. Pacific Gem Cutters, 424 So. Broadway, Los Angeles, California.

FLUORESCENT MINERALS: Complete line of the fluorescent and rare minerals from the famous Franklin, N. J. mines. Complete line of Mineralights, \$12.50 up. Set of 10 fluorescent minerals, mounted in Styrofoam, labeled. Specify weight length, \$2.50. SPECIAL: 5 brilliant specimens of Willemite and Calcite (2x2) \$4.00. Fred W. Morris, 200 Red Maple Drive, Levittown, New York.

"DON'T MISS" Fine rough gems, Minerals, Silver and Lapidary supplies at Superior Gems & Minerals, 4665 Park Blvd., San Diego 16, California. (Sorry, no lists.)

RADIOACTIVE ORE COLLECTION: 6 wonderful different specimens in neat Redwood chest, \$2.00. Pretty Gold nugget, \$1.00, four nuggets, \$2.00, choice collection 12 nuggets, \$5.00. Uranium Prospectors, Box 604, Stockton, Calif.

THANKS TO ALL who have praised my Arizona agates their bright beautiful colors and unusual designs, we hope to open agate mines soon. Charles E. Hill of The Arizona Agate Mines, Cave Creek, Arizona.

INTRODUCTORY OFFER: 6 highly polished Baker Ranch colorful nodules, assorted patterns, \$1.00 postpaid. Write for free lists of New Mexico minerals and cutting materials. Van Sant's, Box 487, Truth or Consequences, New Mexico.

WRITE FOR DESCRIPTION—Rocks and Peridots. Box 101, Pima, Arizona.

SULPHUR: very nice yellow crystal groups, only 25c and 50c postpaid. Frey, Box 9350, Reno, Nevada.

WANTED: Plume and Sagenite Agate slabs or chunks. Will buy or trade Jade, Rhodonite, Jasper, Agate and Biconoids. Write Ken C. Huff, Creston Rt., Paso Robles, California.

PEANUT PITCHSTONE (Alamasite)—Mexico's oddest semi-precious stone, for polishing or collecting, 3-lb. chunk \$5 postpaid. Or, Rockhound special, 1-lb. fragments \$1. Also Flor de Amapa (pink crystalized edidote) rare. Same prices. Alberto E. Maas, Alamos, Sonora, Mexico. Send checks only.

FLUORESCENT AND Phosphorescent Nodules: Beautiful variety of colors. Matched halves \$1.50 to \$3.00, halves \$1.00, parts 60c. Postpaid. B. P. Lehmann, 2831 Stadium, Wichita, Kansas.

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ATTENTION ROCK COLLECTORS. It will pay you to visit the Ken-Dor Rock Roost. We buy, sell, or exchange mineral specimens. Visitors are always welcome. Ken-Dor Rock Roost, 419 Sutter, Modesto, California.

BLACK ONYX blanks 25c each. Red Onyx blanks 35c each. Green Onyx blanks 35c each. Prompt service given to mail order jobs. All kinds of fine cutting. Juchem Bros., 315 W. 5th St., Los Angeles 13, California.

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ROCK COLLECTORS ATTENTION! Back in desert for winter—new rocks—new Trailer Rock Store, The Rockologist, Box 181, Cathedral City, California.

PETRIFIED WOOD CABOCHONS — Arizona. Beautifully multi-colored with mirror finish. Ring size 50c brooch size \$1.00. Minimum \$1.00 please. George Angel, 410 W. Colorado, Glendale, California.

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FANCY PALM ROOT 25c to \$1.00 per sq. inch. In slabs, prices vary according to quality. Uncut root from \$1.00 to \$3.00 per lb. Also some fancy Lavie Agate. Edw. Lang, 2110 Walnut Ave., Venice, California. EXbrk 66622.

TEXAS AGATE—Selected slabs sent on approval. Just returned from a big south Texas agate hunt. Got some good agate this time, mixed lots of yellow, red & green moss, banded & variegated \$1.00 pound. 10 pounds for \$8.00. Postage please. B. & H. Gem Shop, 2005 N. Big Spring St., Midland, Texas.

WANTED: Please send close description and wholesale quotation on 25 to 100 lbs. any rock or mineral specimen suitable for resale. More interested in form and color than in cutting material. Niangua Gift Shop, Camdenton, Mo.

AMONG THE ROCK HUNTERS

Specimens gathered on a year-long trip to the mines and collecting areas of Africa were shown at a meeting in Los Angeles of the Pacific Mineral Society. George Burnham spoke to the group about his African trip and showed colored slides to illustrate his remarks.

Two films on the telephone industry, "Crystal Clear" and "Voice Sentinel," were projected at a meeting of San Antonio Rock and Lapidary Society. They showed how substitutes for natural quartz were grown in laboratory "gardens" to provide enough of the vital elements for telephone parts. The quartz crystal is the controlling heart of the nation's telephone and radio networks.

A special silent auction for junior rockhounds was held during the January meeting of Colorado Mineral Society. Senior members had their own separate auction.

Helpful hints on lapidary machinery were given by Lawrence Jensen in a chalk talk to members of Minnesota Mineral Club. Hazen Perry showed motion pictures on the main topic of the evening, "The Growth of Crystals in the Earth."

Demand for fluorite is increasing every day, in the opinion of Roy L. Cornell of the California Testing laboratory. War time developments have increased the use of fluorine gas tenfold in the chemical field. Fluorine, he said, is the most active and vicious of the elements. It has such an affinity for hydrogen that it burns on contact with water by decomposing the water and uniting with the hydrogen. A stream of water injected into fluorine gas will burn like ordinary fuel. Steel, asbestos, glass and quartz also will burn in fluorine gas.

Desert Gem and Mineral Society of the Palo Verde Valley, California, is planning a show in early spring.

SLABS—5c per square inch. Consists of a mixed lot of 10 or more different types, a few of which are Jade, Tigereye, Lapis, Palm, Sagenite, Wood, Agate, Jasper and others. Minimum order—40 inches \$2.00 plus 20% Fed. Tax if not a dealer. The larger the order the larger the variety. Please add postage. Mixed Cutting Material, 25c per lb. Coast Gems & Minerals, 11669 Ferris Road, El Monte, California.

ARIZONA PERIDOTS—The August birthstone. Facet grade, cutting up to 4 carats \$3.00 an ounce postpaid and tax included. Also cut stones. Inquiries invited. Luther L. Martin, Box 1922, Globe, Arizona.

NEW SUPPLY of Beautiful Montana Sapphires. Just got in another lot of those beautiful Montana Sapphires and if you facetters haven't taken advantage of the offer that I have had in the past you are missing something. Orders and repeat orders are coming in daily from facetters, mineralogists and collectors who are well pleased with the Sapphires and report good results with finished sets. This new supply of Sapphires seems to be a little better than those I had before, but the price is the same, only \$1.50 per large glass vial of at least 25 beautiful stones, and as a New Year's gift I will send you free a large nodule of beautiful Oregon Red Moss Agate, or a vial of pretty green gem Arizona Peridot or a solid gold nugget, or a vial of beautiful Arizona Ruby Red Garnets. Take your choice. K. O. Otoupalik, Sr., The Big Timber Agate Shop, 640 River St., Missoula, Montana.

HISTORY, GEOLOGY OF DRY DESERT LAKE OCCUPY AUTHOR

History and geology of a desert lake now dry and the economic deposits contained in it are the subjects of a report recently issued by the California Division of Mines.

Hoyt S. Gayle, a former member of the staff of the U. S. Geological Survey, is the author of Special Report No. 13, *Geology of the Saline Deposits, Bristol Dry Lake, San Bernardino County, California*. His researches in the area have occupied him intermittently since 1916; this report is a condensed presentation of his results.

Among the minerals commercially produced from Bristol Dry Lake deposits are gypsum, sodium chloride and calcium chloride. Considerable reserves of celestite (strontium sulfate) are available in the lake if the commercial demand should warrant mining.

In addition to a map of the Bristol Dry Lake area, the report contains an appendix consisting of 19 drillers' logs of holes bored in the lake. The entire report, including 21 pages, 2 figures and one plate, is available at 35 cents from the California Division of Mines, Ferry Building, San Francisco 11, California. California residents should add three percent sales tax to the purchase price.

To increase its library of colored slides, the Gem Cutters Guild of Los Angeles held a party and auction. The slides aid in the identification of gems.

Feather River Gem and Mineral Society, Oroville, California, will be led through this year by new officers: Pearl Parker, president; Eva Niemeyer, first vice-president; Rose Churchman, second vice-president; Iva Foster, secretary, and George Foster, treasurer. Don Parker, Lloyd Niemeyer and Celenia Eowlden are directors.

Seeking to armaline, anthophyllite, talc, andalusite and topaz, members of Whittier Gem and Mineral Society took a field trip to the Winchester magnesite quarry at Hemet, California. Willis Bell served as guide.

Myor Wolfenson spoke on the "Art of Lost Wax Casting," a process for making jewelry, at a general meeting of Pasadena Lapidary Society. Mrs. Jessie Chittenden distributed another of her field trip maps.

"Experiences in Gold and Silver Mining in Colorado" were told to the San Fernando Valley Mineral and Gem Society at a meeting in North Hollywood. The speaker was Marion A. Speer of Western Trails Museum, who also related some of his collecting experiences.

Necessary papers have been signed and sent to the California Secretary of State, and Coachella Valley Mineral Society will soon be an incorporated organization.

Upon learning that the onyx mine near Deming, New Mexico, had been bought by a promotion company and closed to collectors, El Paso Rockhounds took under consideration purchase of one share in the company, providing permission was given for club members to collect from the area all the onyx they wanted. The new company announced that millions of small pieces of the onyx will be used by a large lighter company.

Mineralogical Society of Arizona celebrated its 16th anniversary with a birthday party complete with a 3x4-foot cake. After the anniversary ceremonies an auction was held.

LINCOLN SAPPHIRE TO BE SHOWN AT GLENDALE SHOW

Glendale Lapidary and Gem Society installed its 1952 slate of officers at a recent meeting. Earl Endell took office as president. Gene Neuschwander is new first vice-president; Mella Diller, second vice-president; Winifred Strong, secretary; and Roy Beirdman, treasurer.

Orma Foote and Dan White, who are directing the society's annual show to be presented in Glendale Civic Auditorium May 17 and 18, have announced feature attractions will be the 1318-carat Lincoln Sapphire and the 733-carat Star of Queensland. The former is the head of Lincoln carved from a single large gem.

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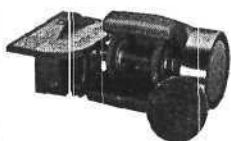
PASADENA, CALIFORNIA

Taking office January 11 were new officers of San Diego Gem and Mineral Society, San Diego, California: Paul M. Brown, president; Jeanne Martin, vice-president; Leslie Burns, treasurer; Violet Dawson, recording secretary; Lyell Hunt, past president, spoke on "Rivers of Western United States" at a recent club meeting. Hunt made particular reference to the Colorado River and its canyons.

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East Bay Mineral Society, Oakland, California, hoped for sunny skies for their January field trip to the Selenite location at San Francisco Beach. After a morning hunting specimens there, they planned to proceed to Pescadero Beach to look for agate, petrified bone, shells and jasper pebbles.

Colored slides of Hollywood Lapidary Society's Fourth Annual Lapidary and Gem Exhibit were shown by Tom Roach at a recent meeting. All cases in the exhibit were photographed as well as some of the floral arrangements, oil paintings and large book-ends.

L. J. Bergsten of Oakland, California, this summer made a field trip to the Wyoming jade fields near Lander. He spoke about his trip and the specimens he collected before members of the Gem and Mineral Society of San Mateo County at a meeting in Burlingame, California.

Indians of North America believed that moonstones were washed up on the shore when the sun and the moon reached a certain position in relation to each other, a position occurring about every 21 years. Thus arose the saying "once in a blue moon."

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IRON MOUNTAIN DISTRICT IS SUBJECT OF MINES BULLETIN

Gold, silver, copper, zinc and sulphur have been the chief products of the Iron Mountain mine, the subject of a new report released by the California Division of Mines. *Geology of the Massive Sulfide Deposits at Iron Mountain, Shasta County, California*, was written by A. R. Kinkel, Jr., and J. P. Albers, both members of the staff of the U. S. Geological Survey.

Claims on the Iron Mountain mine located in the Klamath Mountains 15 miles northwest of Redding, were first staked in the early 1860's and held for the future value of the iron. In 1879, silver was discovered and in 1895, copper. Since then, ore has been mined intermittently for its metal and sulfur content. The report summarizes the history and production record of the mine as well as the general geology of the area and presents a complete discussion of the geology of the mine itself.

Six figures and six plates, including a geologic map of the Iron Mountain mine area, illustrate the 19-page text. The report may be had by writing to the California Division of Mines, Ferry Building, San Francisco 11, California. California purchasers should add three percent tax to the price of 75 cents.

The American Federation of Mineralogical societies has accepted an invitation to join the Rocky Mountain Federation in convention at Canon City, Colorado, June 26-29, 1952.

Redwood Gem and Mineral Society, Santa Rosa, California, will hold its third annual show March 15-16 at the Barnett Motor Company showrooms, 955 Santa Rosa Avenue, Santa Rosa.

Officers of Albuquerque Gem and Mineral Club for 1952 are Daniel W. Gill, president; D. B. Miller, vice-president; Catherine Lewis, recording secretary; Lois Heister, treasurer, and Camille Whiting, corresponding secretary.

Beryl and amethyst were the transparent stones favored by ancient Egyptians for amulets carved in the shape of animal heads. During the eighteenth dynasty translucent or opaque carnelian, malachite, lapis or turquoise in conventionalized designs or scarabs, became more popular.

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STATE ISSUES REPORT ON INYO TALC MINES

Special Report No. 8, issued by the Bureau of Mines concerns Talc Deposits of Steatite Grade in Inyo County, California. It is compiled by Ben M. Page and prepared in cooperation with the United States Geological Survey, for the State Department of Natural Resources. Steatite is exceptionally pure talc suitable for the manufacture of high-frequency insulators and for further exacting uses. It was a critical mineral during World War II. At the beginning of the war there was a single major domestic source, the Talc City mine, Inyo County, California. During the war several other mines in California, Nevada, New Mexico and Montana were utilized as steatite. California continues to lead in the production of domestic steatite. All known deposits of steatite grade in the state are in Inyo County.

Special Report No. 8 may be had by writing to the California Division of Mines, Ferry Building, San Francisco. 85 cents.

Norman Perdleton of the San Jose (California) Lapidary Society asked each member who had colored slides to bring not more than 10 of his best pictures for viewing at the February club meeting. Raymond Addison projected the slides.

A wide variety of gem and mineral exhibits is expected by the Castro Valley Mineral and Gem Society for its third annual show March 29 and 30 at the high school in Hayward, California. Judging of entries will take place Saturday morning from 10 a.m. to 12 noon. The exhibit will remain open until 10 p.m. that evening, and from 10 a.m. to 10 p.m. Sunday.

A. R. Albee is new president of the Gem County Rock and Mineral Society, Emmett, Idaho. He was elected at the group's December meeting, presided over by retiring president, E. C. Brookins. Other new officers are Vern Davis, vice-president; Mrs. A. R. Albee, secretary-treasurer; and Robert Skinner, publicity director. Alfred Perry was appointed field marshall and Brookins is program chairman.

Midwest Federation of Mineralogical Societies has set July 1 through 3 as dates for its 1952 convention and exhibition at MacAlester College, St. Paul, Minnesota. Co-hosts will be the Minnesota Mineral Club and the Minnesota Geological Society. William J. Bingham is chairman.

Les Benson of the Gemological Institute lectured on diamond mining to the Faceters group of Los Angeles Lapidary Society. He illustrated his talk with slides.

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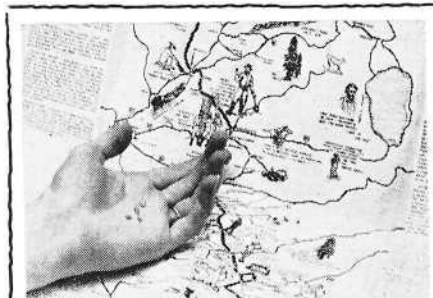
P.O. Box 1405-D, Santa Ana, California

New president of Everett Rock and Gem Club, Everett, Washington, is Charles Krogh. Bob Haglund is vice-president; Charles Cowan, secretary, and George Frost, past president. The 1952 board of directors is composed of A. R. Kinney, program; Loleta Jones, display; Ray Erickson, caravan; Harry Small, Jr., ways and means; William DeFeyer, federation director. Marie Haglund is editor of *Pebbles*, the club bulletin.

At its annual election meeting, Delvers Gem and Mineral Society of Downey, California, chose Woody Ballou, president; J. W. McDaniel, vice-president, and Owen Kent, secretary. Ashley Mine, just east of Pala, California, was the recent field trip destination of the club. Owner Ashley explained workings of the mine and conducted a guided tour through it.

W. T. Rogers is new president of the Mineralogical Society of Utah. Other officers are Junius J. Hayes, first vice-president; Mrs. Charles W. Lockerbie, second vice-president; Mrs. Ora Alt, secretary; Mary Moorhead, treasurer.

When a crystal is broken into two pieces it will cement together again if the proper liquid or vapor is present. Should a crystal, by means of erosion, lose its form or wear away to a mere pebble, it will again grow into its original form. Time has no effect on it and it never seems to die, yet it has no life. It exists but does not reproduce. There is no known limit to the ability of a crystal to repair itself and resume its growth.—*The Voice of the El Paso Rockhound.*



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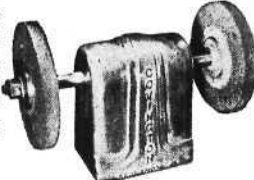
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FOSSIL STUDY VALUABLE IN OIL, GAS EXPLORATION

What good are fossils? Dr. L. L. Sloss
of Northwestern University answered this
question when he spoke to members of the
Earth Science Club of Northern Illinois on
the value of paleontology.

Besides "cluttering up display rooms and
basements," according to Dr. Sloss, fossils
serve four important functions in geologic
work: (1) They provide the only informa-
tion on the very earliest organisms; (2)
They are the best means geologists have
for determining the ages of various strata;
(3) They provide means of recognizing the
position of groups of rocks. (This is espe-
cially important in cases where the original
lay of the strata has been disturbed by later
earth movements as quakes and overthrusts);
and (4) They provide identification and lo-
cation of associated depositions.

The latter two uses are extremely useful
in commerce and industry, primarily in lo-
cating oil and gas locations, coal deposits
and the like. In 1951, millions of dollars
were spent in exploration by the oil industry;
more than 30,000 wells were drilled. In
the ground work for this great development,
fossils were the best index to guide explora-
tion, since the character of the rock alone
was not a sufficient indication.

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um, platinum, rhodium, ruthenium, tita-
nium, tin, molybdenum, selenium, germanium,
manganese, cadmium, thallium, antimony,
mercury, chromium, etc. Prices booming;
many much more valuable than a gold
mine: cassiterite now \$1000 a ton; bismuth
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MONTEREY CLUB INVITES ROCKHOUNDS TO SWAP DAY

Monterey Bay Mineral Society will again
be host at the Mother Lode Mineralogical
Society Annual Swap Day Picnic to be held
May 18 at Modesto American Legion Park.
All rockhunters are invited, and everyone
is urged to bring his best trading material.
Co-chairmen of the annual affair are Louis
Braun and Hubert McIntosh.

The Monterey Society's annual non-com-
petitive mineral and gem show was sched-
uled February 23 and 24 at the Y.M.C.A.
building in Salinas, California. Several new
features were planned.

DESERT SOCIETY TO HOLD SHOW IN BLYTHE NEXT MONTH

Desert Gem and Mineral Society has ex-
tended invitation to all rockhunters to at-
tend its third bi-annual show, April 19
and 20 at St. Joan of Arc Parish Hall in
Blythe, California. All amateur mineral
collectors are urged to exhibit. Displays
must be in the hall by 8 a.m. April 19.
The show is open to the public, and hours
are from 10 a.m. to 10 p.m. both days.

ZOOLOGIST LOOKING FOR FISH FOSSIL SPECIMENS

Robert R. Miller, associate curator of fish
at the University of Michigan Museum of
Zoology, has sent out an S.O.S. to amateur
fossil collectors. According to Miller, the
lack of fossil fish specimens from the Pleis-
tocene deposits of western North America
has greatly hampered study of fish fauna
of the area. All specimens prove significant
in interpreting past distributions and ancient
drainages.

Miller urges rockhunters to look for fos-
sil fish when on field trips in the Basin and
Range Province, which extends roughly
from the edge of the Colorado Plateau to
the Sierra Nevada. Information and speci-
mens should be sent to him, care of the
Museum of Zoology, University of Michi-
gan, Ann Arbor, Michigan.

In the February issue of *Earth Science
News*, monthly publication of the Earth
Science Club of Northern Illinois, appears
a "Table of Certain Radiocarbon Dates,"
compiled by Stanley E. Heggland, Jr. The
table includes data on 21 samples, giving
a description of the specimen, its source
and collector and approximate age. By
using such comparative tables an evaluation
of ideas, things or methods can be made;
but, Heggland warns, more than one specific
table or example is needed to make a fair
evaluation.

ANSWERS TO DESERT QUIZ

Questions are on page 16

- 1—Four feet.
- 2—Grind seeds.
- 3—At point of discovery.
- 4—Agave.
- 5—Apaches.
- 6—Hoover Dam.
- 7—San Juan River.
- 8—An ancient Indian Cliff Dwelling.
- 9—Mountain Man and trapper.
- 10—New Mexico.
- 11—Superstition Mountains.
- 12—Nogales.
- 13—Gallup, New Mexico.
- 14—Creamy white.
- 15—Utah.
- 16—Mouth of the Colorado River.
- 17—Silver.
- 18—The Jayhawker Party.
- 19—Salt Lake City.
- 20—San Geronio Pass.

Amateur Gem Cutter

By LELANDE QUICK, Editor of The Lapidary Journal

Several years ago a good friend of ours wrote us that he believed the gem cutting hobby had run its course. We said at the time that it had not been running anywhere; that it was still in the toddling stage. Since that time it has become America's third largest "doing" hobby and the fastest growing hobby of any kind; all of which we have attempted to prove by figures in these columns on several occasions . . . figures that have been accepted and quoted by several large magazines in articles about the hobby.

But you must sit at a desk such as ours and edit a magazine about it to realize for sure that gem cutting and rockhounding are coming to the fore faster in every quarter of America. Peep over our shoulder while we open one day's pile of mail and see what we find besides the business side of publishing.

First comes a letter from Robert E. Coin, Oakridge, Tennessee. He sends along a copy of *The News*, a publication of the employees of the Carbide and Chemicals Co. and the Union Carbide and Carbon Corp. at you-know-where. The paper features Mr. Coin's lapidary hobby and has a nice picture of his work. The article states that Mr. Coin is anxious to form a gem and mineral club at Oak Ridge, among the firm's employees. An accompanying letter advises that he made a 30-minute radio talk January 20 about gem cutting. The talk was transcribed and then re-broadcast several times. This program followed the enthusiastic response, 10 days earlier, of the 60 employees who came to hear Dr. Stockdale of the University of Tennessee talk about the minerals of that state. The group then organized the Oak Ridge Mineral Society. It will meet in the Atomic Museum on the second Thursday of each month but it is unique in that it cannot report "Visitors Welcome." Mr. Coin (the new president) further advises that, because of the broadcasts, groups of citizens are now organizing clubs in Knoxville and Chattanooga.

This information particularly interests us, for just four years ago we ran an advertisement for our *Lapidary Journal* that stated—"Wanted: A subscriber in Tennessee . . . the only state not represented in our subscribers' files." We did not wait long.

Now we find an interesting letter from Dr. William F. Tolar of Berwyn, Illinois, a dentist. He tells us that he and another dentist (Dr. Bayne of Henry, Illinois) are writing by request a series of articles on jewelcraft and gem cutting for their state dental journal because these two hobbies lead among dentists' hobby activities. In other words — they pull strong with the dentists.

Dentists quite naturally gravitate into gem cutting and silver casting because they

are grinding and casting in their professional activities daily. They adapt their hobby to their existing laboratory machinery or vice versa. It was a dentist who first got us interested in lapidary work by showing us what he did in his spare time in his laboratory with opal. He sold us five huge pieces from his private stock for only 25c each. It was a dentist (Dr. Henry Dake of Portland, Oregon) who started 20 years ago, and still publishes, *The Mineralogist* magazine. Almost every mineral and gem society in America numbers at least one dentist in its membership. Dr. Hudson, a dentist of Dayton, Ohio, is one of the nation's top faceters and best known amateur gemologists.

We open another letter from which falls a clipping from a New York newspaper dated January 10. It is an account of the success of the New York Lapidary Society and we take pardonable pride in quoting a paragraph—"the group of hobbyists formed two years ago when Leland Quick, editor of the *Lapidary Journal*, gave a lecture at the American Museum of Natural History. After his talk he found 100 of his audience crowding around him eager to establish a club such as he advocated."

The paper goes on to state that gem cutting and mineral collecting is the fastest growing hobby and it tells of the organization of a youth group within the New York club. The society maintains its own quarters in which is established their own lapidary shop, open to the members seven days a week.

Next we come to an account of the organization of a new group among the employees of the Hughes Aircraft Co. at Culver City, California. Large rockhound groups have existed for years at the plants of the Consolidated Aircraft Co. at San Diego and at the Lockheed plant in Burbank, California. The *Industrial Sports Journal*, which goes to most personnel managers around the nation, regularly features a lapidary section for industrial organizations.

If any reader happens to be a lapidary and works in a large organization he will find that the response to his hobby among his fellow employees will be beyond his comprehension. Try it out and see. Get permission from your department head to display a tray of your work in the company cafeteria or library or any place where a large group can come and see it. Then post a notice on the bulletin board, or run an article in your house organ, to the effect that you will cooperate in the organization of a company hobby group. The response which follows will place you in a position to ask your company to supply the space and equipment for a shop. Try it and see—and let us know the results.

This page of *Desert Magazine* is for those who have, or aspire to have, their own gem cutting and polishing equipment. Leland Quick, who edits "The Lapidary Journal," will be glad to answer all questions in connection with your lapidary work. And he would like details about new short cuts or devices which lapidary workers have discovered, to pass on to readers. Queries and information should be addressed to *Desert Magazine*, Palm Desert, California.

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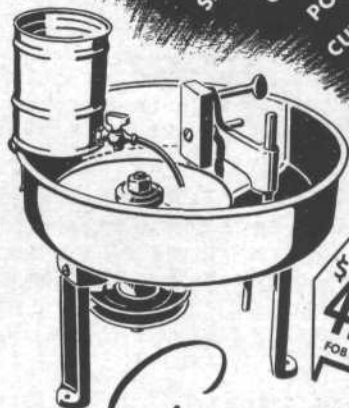
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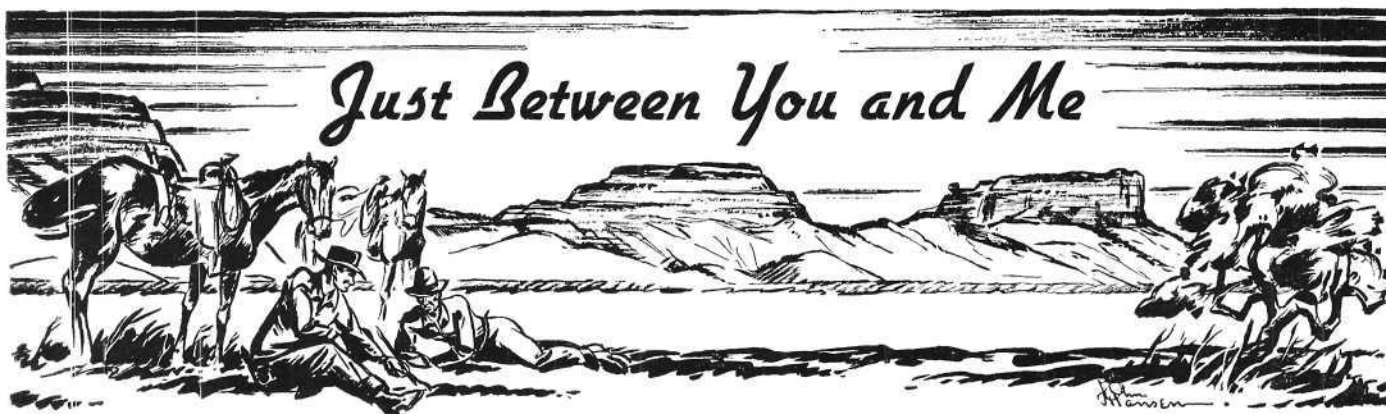


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By RANDALL HENDERSON

THE RAIN GODS were generous to much of the desert country this winter. And as this is written, early in February, billions of little green sprouts are coming up through the sand and in the crevices between the rocks. There is moisture in the ground to provide the most colorful wildflower display we have seen since 1949, when the dunes were covered with verbena and evening primrose.

Unless freezing temperatures or excessive winds intervene the blossoms will be quite generally in blossom on the desert lowlands by the first of March, and at various elevations will reach their peak during that month. Above 3000 feet the most gorgeous flowering will come a little later—during April and early May.

The rains were heavy enough this winter over the Colorado desert to seep down to the desert lily bulbs many inches below the surface. I hope that among the many pictures of the lily taken this year there will be at least one beautiful 4x5 color transparency that will be available for a future *Desert Magazine* cover.

• • •

The rains have done something else for the desert. They have filled the great under-the-surface fractures in the earth's crust of rock with water—and these fractures or faults are the reservoirs which feed the springs.

Many of the springs and tinajas that dried up during the prolonged years of drouth are again filled with water—and that will give added pleasure and security to those of us who are looking forward to March and April as the ideal months for exploring remote ranges and mesas.

• • •

From the window of my office I can see the rugged north slope of the Santa Rosa mountains less than 10 miles away. From this distance it appears to be a mountain terrain without water or life in any form.

But like most desert mountains, the distant view is deceiving. Actually the mountain slope is drained by a half dozen canyons where there are springs for the wildlife, and luxurious vegetation, including many majestic members of the wild palm family.

It was in one of these canyons that George Roy made the acquaintance of a little band of bighorn sheep and wrote about them for *Desert Magazine* (March '51.)

Thirty years ago the bighorns in the Santa Rosas had almost been exterminated by ruthless hunters. Then the California Fish and Game commission stepped in and

made it a game refuge. Under this protection, the wild sheep slowly have been gaining until today there are estimated to be between 50 and 60 of them on the range.

Recently some of the deer hunters asked that the refuge be abolished insofar as deer are concerned—so they could go in there with firearms. The Fish and Game commission held a public hearing at which many of my neighbors protested against the re-opening of the refuge.

I am glad to report that the commission has ruled against the hunters. The north slope of the Santa Rosas will remain a refuge for wildlife. At the present rate of gain it will not be many years before motorists will get an occasional glimpse of those magnificent bighorns from the Palms-to-Pines highway.

The problem of game for hunters is becoming increasingly difficult, especially in California. Mainly, the trouble stems from rapidly increasing population. The hunters tend to increase in number while the areas available to them shrink—due to road construction and the extension of populated resort areas.

I do not know the answer—but I suspect that in a social order where it is no longer necessary to kill in order to live, that the killer instinct which we humans inherited from our primitive ancestors eventually will give way to the ideal of live and let live.

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One of the letters which came to me recently was from W. M. (Casey) Jones whose cabin is along one of the tributary arroyos of the Hassayampa River seven miles from Morristown, Arizona. He is an old-time railroad telegrapher who was forced by ill health to retire four years ago and is now living on a meager pension.

I've never met Casey, but I would like to know him, for he wrote me one of the most stimulating letters I have ever received. He is endowed with more courage and understanding than most of us humans have. He has to remain 70 percent of his time in bed, but despite his handicaps he has set up a little laboratory where he spends his active hours experimenting with chemistry and plastics.

Casey wrote: "Sixty summers are soon going to pass me by, and how many winters I know not, but I hope many of them, for life started four years ago to be a glorious adventure. I went broke in the deluge of 1930, and still am, but am now wealthy without any coin. Such is life, and oh how beautiful when one is reconciled to accepting things as they are—and really starts living at 60."

Books of the Southwest

BIOGRAPHY TELLS OF FIGHT TO ESTABLISH PARK SYSTEM

More than 32,000,000 persons visited the National Park system in 1950. By well-paved highways they gained ready access to the scenic grandeur thus preserved for them. Within the confines of the 28 national parks and many national monuments, they found comfortable lodges, restaurants, camp sites and picnic areas to make their stay pleasant. Park rangers guided them on tours, explaining geology, botany, archeology, wild life and natural phenomena of the area.

Few of those 32,000,000 persons ever heard the name, Stephen T. Mather. Yet their national park vacation might not have been so enjoyable but for this one man's efforts for the conservation of natural beauty.

In 1914, Steve Mather—philanthropist, California mountain climber, industrialist—was 47 years old. He had made millions out of "Twenty-Mule-Team" Berax and had time to follow his hobbies of riding, hiking and mountain climbing. He spent weeks at a time in the natural wonderland of Yosemite National Park, several times meeting the venerable naturalist, John Muir.

When Mather complained that year, in a letter to the Secretary of the Interior, that the national parks were underfinanced and mismanaged, without decent roads and accommodations—"a disgrace to the federal government," he was answered: "If you don't like the way the parks are being run, come on down to Washington and run them yourself."

Mather came. He stayed 14 years as assistant secretary of the interior, under three presidents and five secretaries.

In *Steve Mather of the National Parks*, biographer Robert Shankland chronicles Mather's achievements in gaining establishment of the National Park Service in August, 1916, and in defining the policies under which its areas should be developed and conserved. Shankland offers penetrating insight into Mather's love of nature and his desire to preserve its more awe-inspiring phases for the delight of future generations of Americans. He tells, too, the story of the parks themselves and of the fight against corruption, commercialization and destructive private interests.

Steve Mather of the National Parks

is a rich and human book for all who love outdoor life.

Published by Alfred A. Knopf, Inc., 1951. 326 pages, halftone illustrations, bibliography, index. \$4.00.

• • •

Calexico Cavalcade association has prepared a beautiful program in connection with the 13th presentation of the Desert Cavalcade March 21-22. Many pages of the brochure are devoted to historical data revealing the background of the pageantry to be presented by the community. Copies of the program may be obtained for 25c either by addressing the Desert Cavalcade at Calexico, or *Desert Magazine* at Palm Desert.

• • •

As a teacher of art in Bishop Union High School, Bishop, California, J. E. Morhardt finds himself with many free hours. When not out mining or prospecting, he spends this time writing poetry and painting water color scenes of the desert. His *Death Valley Poems*, recently published in an inexpensive edition by Chalfant Press, Bishop, is the result of many desert years. The 38 poems reflect the life of the miner, the prospector (Morhardt knows well this life) and the desert wanderer, and they paint a convincing picture of the desert scene. Illustrated with photographs and ink sketches by the author. Paper bound, \$1.00.

THE *Desert* MAGAZINE CLOSE-UPS

Walter H. Koch, author of this month's story of adventure on the San Juan and Colorado Rivers, was born in Germany but spent 10 years of his boyhood on the Malay Peninsula, in London and South England. A mining geologist, he is a graduate of the Mining College of Freiberg, Germany. For many years he practiced his profession in mining camps scattered throughout this hemisphere, from Newfoundland to Mexico and from California to Cuba.

Since 1931, Koch has been a resident of Salt Lake City, Utah, and has been employed as a mineral examiner for the U. S. General Land Office and Bureau of Land Management.

His work assignments have taken

him to many of the primitive regions of the west, often to the desert country of southeastern Utah, and have provided him many opportunities to follow his hobbies of photography and mineral collecting.

• • •

When asked about herself Ada Giddings usually replies, "My parents were poor, but Quakers," and lets it go at that.

Mrs. Giddings was born in West Branch, Iowa, and taught school in that midwestern state before accepting a teaching assignment which took her to New Mexico. After their marriage, she and her husband, a native Californian and enthusiastic member of the rockhound fraternity, moved to California and filed for homestead land 13 miles north of Mojave. They called this desert acreage home for five years. Mrs. Giddings became a member of the first board of the Red Rock School District.

Author Giddings now lives and writes in Laguna Beach, California. She especially enjoys the research which precedes a story such as "Goler's Lost Gold," appearing in this issue. She has had many poems published, a number of them in *Desert Magazine*.

• • •

When the winter rains come to Southern California, Norton Allen and his father take off in their trailer for Gila Bend, Arizona, where they camp and spend their spare hours exploring all Indian ruins. Norton, who has been drawing maps for *Desert Magazine* readers since 1938, is an amateur archeologist with a fine collection of artifacts brought together over a period of 20 years. The Allen home is on the hill overlooking La Mesa, California.

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